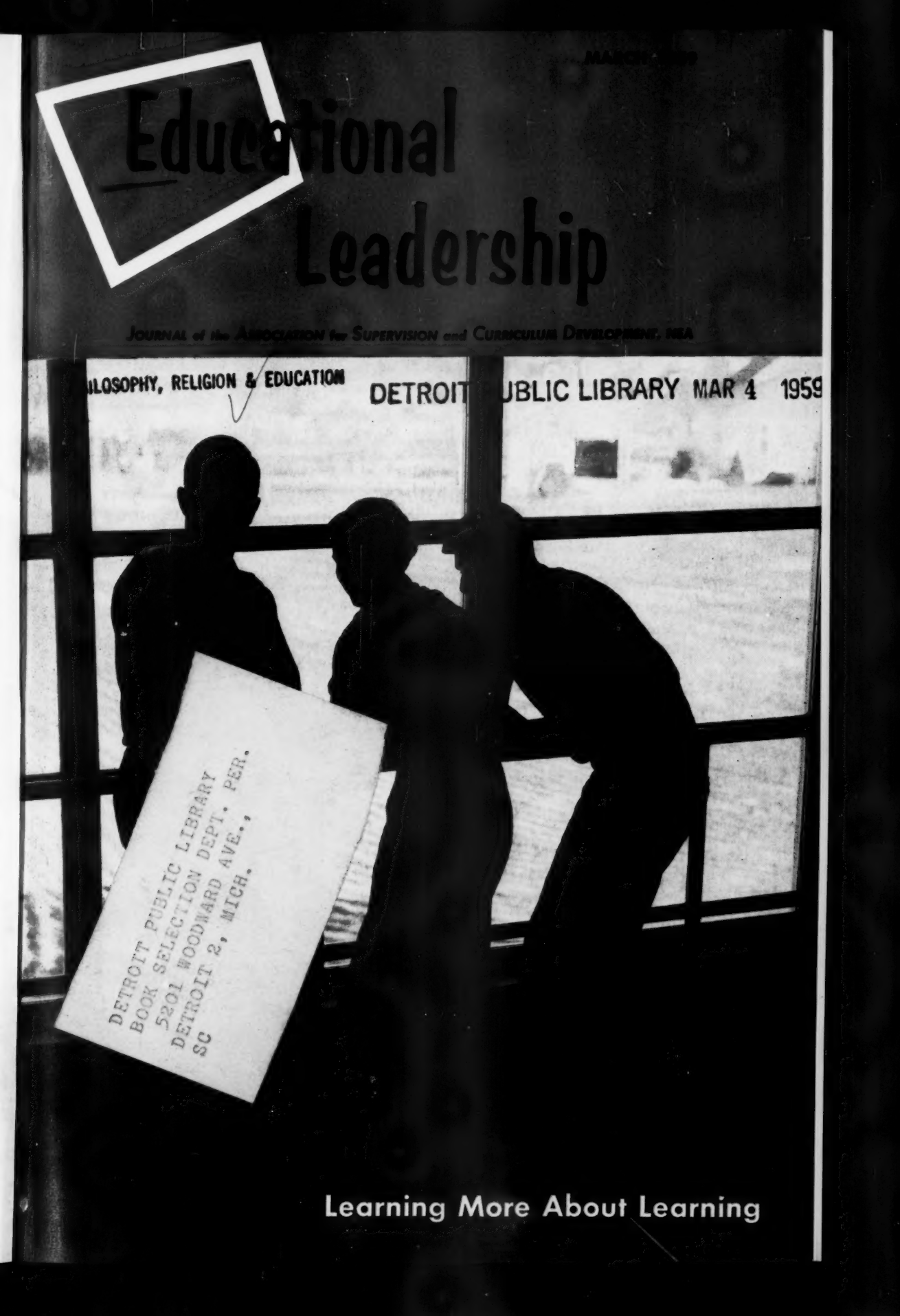

Educational Leadership
JOURNAL of the ASSOCIATION for SUPERVISION and CURRICULUM DEVELOPMENT, NEA
ILOSOPHY, RELIGION & EDUCATION
DETROIT UBLIC LIBRARY MAR 4 1959
DETROIT PUBLIC LIBRARY
BOOK SELECTION DEPT. PER.
5201 WOODWARD AVE.,
DETROIT 2, MICH.
SC
Learning More About Learning

ASCD Headquarters Staff

Executive Secretary, Rodney Tillman
Associate Secretary; Editor, ASCD Publications, Robert R. Leeper
Associate Secretary, Margaret Gill
Associate Secretary, O. L. Davis, Jr.
Administrative Assistant, Virginia Berthy
Staff Assistants, Suzanne Buckler, Francis Cawley, Ruth P. Ely, Evelyn M. Ford, Ruby J. Funkhouser, Frances Mindel, Penelope Reid, Pamela Tucker, Ruth N. Tyler, Lounell G. Vonland.

Executive Committee

President, Jane Franseth, Spec. for Rural Ed., Off. of Ed., Dept. of Health, Ed., and Welfare, Washington, D. C.
President-Elect, William M. Alexander, Prof. of Ed., George Peabody Coll. for Tchrs. Nashville, Tenn.
Vice-President, G. Robert Koopman, Assoc. Supt., Mich. Dept. of Pub. Instr., Lansing.
Susan Crutchfield, Dir. of Elem. Ed., Public Schools, Galveston, Tex.
Arthur W. Foshay, Exec. Off., Horace Mann-Lincoln Inst. of Sch. Experimentation, Tchrs. Coll., Columbia Univ., N. Y.
Lavone A. Hanna, Prof. of Ed., San Francisco St. Coll., San Francisco, Calif.
Sam H. Moorer, Dir., Div. of Instr. Field Services, St. Dept. of Ed., Tallahassee, Fla.

Publications Committee

Alice Miel, *Chairman,* Teachers College, Columbia University, New York (1959)
Galen Saylor, *Chairman-Elect,* University of Nebraska, Lincoln (1961) (Region XI)
Willard Abraham, Arizona State College, Tempe (1961) (Region XII)
Leslee J. Bishop, Evanston Township High School, Illinois (1961)
Martha J. Cottrell, Board of Education, Charleston, West Virginia (1960) (Region III)
Hazen A. Curtis, Florida State University, Tallahassee (1959) (Region IV)
Edgar Farley, Public Schools, Garden City, New York (1960)
Alma M. Freeland, University of Texas, Austin (1960) (Region VIII)
Zelda Gordon, Public Schools, South Windham, Maine (1959) (Region I)
Philomen H. Gregg, Public Schools, Marion, Ohio (1961)
Elsie Hayes, Fort Campbell Dependent Schools, Fort Campbell, Kentucky (1961)
Elizabeth Zimmerman Howard, University of Chicago, Illinois (1959)
Goldie R. Huey, School District No. 2, Casper, Wyoming (1961) (Region IX)
Herbert J. Klausmeier, University of Wisconsin, Madison (1960) (Region VI)
Alvin D. Loving, University of Michigan, Flint (1959)
Dorothy Oldendorf, Public Schools, Wilmette, Illinois (1961) (Region V)
Arthur R. Olson, Public Schools, Denver, Colorado (1961)
Lorrene Love Ort, Bowling Green State University, Bowling Green, Ohio (1960)
Don S. Patterson, Eastern College of Education, Cheney, Washington (1960)
Arthur B. Shedd, Fox Lane School, Bedford, New York (1959) (Region II)
Bearnice Skeen, Western Washington College of Education, Bellingham, Washington (1959) (Region X)
Gretchen Wulfing, Public Schools, Oakland, California (1960)
Jane Franseth, *ex officio,* President, Association for Supervision and Curriculum Development, NEA

Educational Leadership

JOURNAL of the ASSOCIATION for SUPERVISION and CURRICULUM DEVELOPMENT, NEA

Editor, ROBERT R. LEEPER
Editorial Assistant, RUTH P. ELY
Advertising Manager, SUZANNE BUCKLER
Circulation Manager, FRANCES MINDEL

Vol. XVI, No. 6 **March 1959**

Learning More about Learning

Editorial

Learning about Learning: A Key to Curriculum Improvement — *C. W. Hunnicutt* 330

Articles

Learning Theory and Teaching Practice — *Henry Clay Lindgren* 333
How Well Are They Learning? — *Warren A. Ketcham* and *Rondeau G. Laffitte, Jr.* 337
Learning about Learning Through Cooperative Research — *Bennie Carmichael* and *David Turney* 342
Learning about Individualized Teaching — *Alma Brown* 346
A Comprehensive High School Studies Learning — *Jean Fair* 351
A Look at Secondary Education Methods Courses — *Margaret Gill* 355
Teachers Study Use of Bulletin Boards — *Elizabeth Parker* and *Curriculum Committee* 362

Departments

The Importance of People — *Fred T. Wilhelms* 369
Curriculum News — *Paul R. Klohr*, *Victor B. Lawhead* 373
Curriculum Bulletins — *Marcella R. Lawler* 377
Curriculum Research — *Alexander Frazier*, *M. Vere DeVault* and *Beeman N. Phillips* 383
Significant Books in Review — *Howard B. Leavitt*, *Prudence Bostwick* and *Victor B. Lawhead* 387

Cover photograph courtesy Nelson H. Lund, Saginaw High School, Saginaw, Michigan

EDUCATIONAL PRESS ASSOCIATION OF AMERICA

The Association for Supervision and Curriculum Development seeks to provide an open forum for the free expression of competent opinion relating to its area of interest. The materials herein printed are the expressions of the writers and not a statement of policy of the Association unless set by resolution.

EDUCATIONAL LEADERSHIP is published monthly, October through May, by the Association for Supervision and Curriculum Development, National Education Association, 1201 Sixteenth Street, N.W., Washington 6, D. C. Subscription price, $4.50 a year. Single copies, 75 cents. Association membership with subscription and yearbook, $8 a year. Member of the Educational Press Association of America. Contents listed in *Education Index*. No remuneration is offered for contributions. Second class postage paid at Washington, D. C. EDUCATIONAL LEADERSHIP is printed by Judd & Detweiler, Inc., Washington, D. C. Copyright 1959 by the Association for Supervision and Curriculum Development, NEA.

Editorial

Learning about Learning: A Key to Curriculum Improvement

AS USUAL, we whose lives are devoted to school curriculum are up to our necks in a sea of criticism. This is a normal state of health. Every period of dynamism and progress has found education a center of controversy. In times of danger people recognize the importance of education and cry for its improvement. And every thoughtful person, regardless of his own schooling, is likely to hold firm convictions on the indispensable curriculum and the best ways to teach.

This condition, accentuated as it is today, can be a help to us. Criticism from friend and enemy alike encourages us to reexamine what we are doing, and to speed up improvement. This speedup is needed today as never before. We have a tough task.

Two factors seem especially significant: One is the growth of our reservoir of established knowledge. The other is the influence of the international scene.

Through research and scholarship, the sum of our factual knowledge is growing at an ever-increasing pace. For each person who but a few decades ago was devoting his life to a search after facts, there are a thousand so engaged today. Our fund of verified knowledge doubles and redoubles in ever shorter periods of time. It is probably now doubling in a time interval lying somewhere between a decade and a generation. The choice of the particular knowledges to be taught thus becomes ever more difficult. The need for greater efficiency in our teaching becomes ever more obvious, if we are to teach even a fraction of what is needed by educated youth today. We must help young people to learn more during each hour of school.

The second significant factor is that for the first time in American history "our side" is outnumbered by those inimical to our way of life. From the Revolutionary War to World War II the effectives brought to bear by the American side (or by the North in the War of the 1860's) outnumbered the opposition. The more numerous side always won the struggle. This comfortable condition no longer exists. We are confronted by a vast, intelligent and ruthless enemy apparently dedicated to our destruction. The Communist-controlled population today greatly outnumbers the population of those nations committed to anti-Communism. The number of effectives that the former can bring to bear vastly exceeds our manpower potential.

One obvious implication is that if we are to survive we must use our various potentialities to the full—especially our potential brainpower. The role of brainpower—of "eggheads"—in our survival has been adequately dramatized in the post-sputnik panic. Everyone now admits its importance, albeit perhaps a bit grudgingly. Our schools are the institution whose task it is to identify and cultivate the brainpower of each generation. Today this purpose is accentuated. And we are uncomfortably conscious of the fact that the Communist powers have

long been aware of the vital role schools and education will play in determining the future of the world. They take education very seriously.

We in America must help each child or youth to see that he has a patriotic obligation to develop his own capacities to the full. He must see the need to study hard and work hard. As he makes himself most valuable to our society, he strengthens our society correspondingly. If he is of college caliber, he should attend college and take the difficult subjects. Selfish ambition and patriotic duty for once coincide. "Getting ahead in the world," in this sense, contributes to our survival. Regardless of the occupation a youth may later pursue, if it is one that challenges his full abilities and if he is doing his best in it, he is strengthening America.

The task confronting children and youth in our schools, then, is clear: study hard, work hard, aim high. Our own task is more complex. We must be sure that our teaching methods are the most efficient and that the knowledges, skills and attitudes we impart are those having the greatest value. We no longer have a comfortable safety margin for dallying and for error. Each hour is precious.

What we teach—curriculum—is crucial as never before. What social studies, for example, are we teaching? What are we teaching about the people of Africa, India and the rest of Asia, who are not yet committed toward or against Communism? They hold the balance of power and may well determine our future.

How well are we helping each child's innate creativeness to flourish? Inventiveness in all areas is the key to our progress and survival.

Are we trying to select from the unimagined millions of scientific facts those most essential for youth to master? Or are we primarily using these facts as resources for teaching skills and attitudes?

What of communication? Clear communication and clear thought are apparently inextricable.

What are the emerging needs in foreign language as we become more dependent upon people speaking languages of which we have not even heard?

Teaching Efficiency

The emerging problems of curriculum choice are clear and tempting. An equally compelling and more immediate concern in this journal, however, is with ways to increase our teaching efficiency.

We can anticipate that curricular demands will continue to grow as we grow in knowledge and in national need. At the same time, our youth will need a higher proficiency in basic skills. Yet the number of hours available for effective learning is unlikely to increase appreciably. This seems to pose a difficult dilemma.

Our most hopeful clue to the greatly increased teaching efficiency we need lies in an increased understanding of the learning process. Concern with the learning process is as old as education itself. The amazing success of Aristotle and other early Greek teachers in helping others learn continues to impress us across the centuries. To quote Edith Hamilton,[1]

> We (in America) need the challenge of the city . . . wherein for centuries one genius after another grew up. Geniuses are not produced by spending money. We need the challenge of the way the Greeks were educated. They fixed their minds on the individual. . . . The Athenians in their dangerous world needed to be a nation of independent men who could take responsi-

[1] "The Lessons of the Past." *Saturday Evening Post*, September 27, 1958. p. 116-17.

Announcing—

Fourth ASCD Curriculum Research Institute,

Western Section,

in cooperation with

The National Institute of Mental Health

Theme—

Underdeveloped Capacity to Learn:

An Area in Need of Study and Research

May 2-6, 1959 Los Angeles, California

For information write to:

ASCD, NEA, 1201 16th St., N.W.

Washington 6, D. C.

bility, and they taught their children accordingly. . . . To them education was by its very nature an individual matter. . . .

As time went by, other great teachers left their imprint. Here and there men sought to understand the process by which humans learn. But not until our own century could methods of studying this process go much beyond mere observation and introspection. The trouble with introspection appeared to be that when one was learning most intensely there was no part of his mind left to stand off and watch what was happening.

Experimental psychologists such as Pavlov and Thorndike carried this issue into the laboratory. Their work led to the many insights related to connectionism and conditioning. This in turn led to the excesses characterizing the drill theory of learning. In pure form, children were treated almost as machines or automatons, incapable of creative thought. The research underlying this approach to teaching in its efforts to eliminate everything from the situation but the two stimuli being tested (e.g., bell and meat), had so distorted and oversimplified the learning process as to bear little resemblance to a complex classroom situation.

The inevitable reaction to these distortions took form in the various ideas associated with field theories of learning. For the past quarter of a century the various forms of organismic psychology or field theory have grown in influence, especially among those affiliated with ASCD. This is true despite the fact that any "systematic field theory of learning has yet to be formulated." [2]

Many exceedingly useful understandings of the learning process have grown out of efforts centering in a field theory point of view. The meaning approach that characterizes present-day arithmetic teaching is one direct outgrowth. Some of the many other insights that should guide our instruction are gathered within this issue of *Educational Leadership.*

A final reminder of how vast is our basic ignorance of the physiology of learning—what actually happens within the brain when we learn—is provided by the work of various neural surgeons. For years they have been exploring neural pathways within the many parts of brains exposed during surgery. Electrical stimulation of particular neurons has brought surprising results. The fact that such crude exploration as this should be "frontier research" is a measure of the scantiness of our knowledge. To paraphrase Oppenheimer, in this area, too, we have mere patches of knowledge scattered over a vast field of ignorance. The next decade should bring a great expansion in our understanding of the learning process.

—C. W. Hunnicutt, *professor of education, Syracuse University, New York.*

[2] William A. Brownell. "The Study and Guidance of Learning in Children." *Education 2000 AD.* Edited by C. W. Hunnicutt. Syracuse: Syracuse University Press, 1956. p. 130.

HENRY CLAY LINDGREN

Learning Theory and Teaching Practice

What are the main sources from which we draw the learning theories that affect our behavior regarding education?

THE educational picture today is full of paradoxes and inconsistencies. The same people who use pragmatic grounds for criticizing the schools—that is, who find fault because graduates are not able to function adequately as employees—are often the same ones who urge that the curriculum be "beefed up" with subject matter that has little "transfer value," as far as employment skills are concerned. Teachers, too, sometimes display inconsistencies in their behavior, stressing one point of view when talking to colleagues but displaying classroom behavior that is obviously at variance with the philosophy of education they are in the habit of expounding. An example of such "compartmentalized thinking" is the elementary teacher who claimed that she ran her classroom strictly according to democratic principles—each year she wrote the rules for classroom conduct on the board, and the children voted to observe them.

Underlying our complex and sometimes confusing patterns of behavior are some rather basic beliefs or theories about learning. Each of us has such beliefs or theories. The comments and criticisms that the layman makes regarding education are based on theories of learning that he considers to be soundly supported by common sense, while the teacher's behavior regarding educational matters, both within and outside the classroom, is based on theories that he considers to be equally valid.

The term "theories of learning" has a formidable sound to it. It may connote research with mice and monkeys, complex mathematical formulae, and esoteric research papers. Unfortunately, our ability to relegate learning theories to the laboratory and thereby to divorce them from the everyday give and take of the classroom has enabled us to dissociate ourselves from any awareness of the part played by theory in our own educational practices. If the question as to the kind of learning theory we are using ever comes up, most of us are inclined to beg the question and direct the discussion to the "more practical" aspects of the teaching situation. Some people in education are even concerned lest anyone think of them as in any way "theoretical." It appears that our emphasis on the practical in America has led us to create an unnatural dichotomy between "theory" and "practice."

Theory and Practice

The plain fact of the matter is that all practice—in education, as well as in other fields—is based on theory. Usually the theory is not consciously stated in so

many words. Rather, it is what Lee J. Cronbach terms an "implicit theory"—a theory that may be inferred from behavior. Some of the confusion and contradiction I described in my opening paragraph is the result of our unwillingness or inability to identify the theories underlying our statement regarding learning or our classroom behavior. If we *were* able and willing to probe into the concepts basic to our behavior, perhaps we would become more aware of the inconsistencies.

There are three main sources from which we draw or develop the learning theories that form the basis of our attitudes and behavior regarding education: tradition, personal experience, and research. Most of us, laymen and teachers alike, depend most heavily on the first two sources. This may be true even of the researcher in the field of teaching methods. All of us have had the experience of taking courses in educational practices from instructors whose own methods violated every one of the principles they were expounding. Timothy Leary tells of a psychology professor who was advising his class of the importance of getting students to solve their own problems. "Don't let them get dependent on you," he said, "make them think for themselves." After the lecture, a graduate student came up to ask a question. He said that in the section of undergraduate students he was supervising as a teaching assistant, he was continually plagued by requests for answers to problems that could and should be solved by the students themselves. "What should I do?" he asked. The professor cleared his throat and said that students were always trying to trap instructors into solving their problems for them—problems that they themselves should work out. "Now what I would do, if I were you," he went on, "is to——." [1]

The aim here is not to point with scorn to the inconsistency of psychology professors, but rather to show how difficult it is to break away from beliefs and attitudes that have, so to speak, become second nature.

Most of us are strongly influenced by the first of the three sources mentioned in the above paragraph—tradition. Our culture tells us, in effect, how people learn. In our culture, one of the main theories of learning is what might be called the "reward-and-punishment" theory—the theory, that is, that people learn because they are appropriately rewarded or punished. There are other traditional theories—the theory of practice, the theory that learning is a process of assimilation; but the reward-and-punishment theory is one of the most basic, and it is this theory that I shall refer to as symbolizing the traditional point of view on learning.

There is, of course, a great deal of truth in this theory. For example, any one of us can think of instances in which the behavior of a child was changed because of the desire to please a teacher (and this in itself is a kind of reward) or because of the fear of being marked as a failure (one of many forms of punishment). Many teachers carry this theory to an ultimate and unwarranted conclusion—namely, that if children were not rewarded or punished by the teacher, they would not learn. This is, essentially, the traditional and autocratic or authoritarian approach to teaching.

***HENRY CLAY LINDGREN** is professor of psychology, San Francisco State College, California.*

[1] Timothy Leary. *Interpersonal Diagnosis of Personality.* New York: Ronald Press Company, 1957.

The uniqueness of our experience and personality means that each of us will develop a somewhat different arrangement or pattern of learning theory to serve as a basis for our behavior as educators. Some of us will be eclectic, attempting to combine traditional theory with theory based on research. Some will depend more directly on personal experience, fortified with a liberal dosage of reward-and-punishment theory. As each of us becomes involved in the teaching-learning process, he learns that certain approaches are more effective for him than others. Or perhaps certain practices are particularly expressive of his personality and attitudes toward life in general.

One person may thus come to believe that learning is fostered best when the teacher is cool, crisp, detached, and objective in his relations with students. Another may believe that students are more likely to learn when the teacher shows a personal interest in the lives of his students, even to the point of involving them in counseling relationships with him. These are but two of the many kinds of theories that teachers may develop with respect to the way in which learning is influenced by their behavior.

Effects of Research

Although most of us in the education profession are inclined to believe that research has had a marked effect on our theories regarding learning, an examination of our actual behavior in the classroom would probably show a considerable disparity between the research-oriented theories we publicly avow and the implicit theories that may be deduced from our behavior. One of the reasons for this disparity lies in the nature of the theories that derive from research.

Let us examine two theories that have important implications for the learning process. One, that derives from research in the field of social psychology, holds that individual behavior can be more readily modified by group decisions than by recommendations emanating from authority figures. Another, deriving largely from clinical research, holds that emotional factors in the life of an individual play an important part in directing his behavior. The teacher who accepts the first theory would be inclined to develop classroom situations in which students have an opportunity to learn through making their own decisions. The second theory leads to an instructional approach based on an understanding of and a concern for the feelings of students.

Note that both these theories are democratic in their implications. They place the student at the focal center of the teaching-learning process, in contradistinction to traditional theories, which are adult-centered and teacher-centered —authoritarian and autocratic. And therein lies a major source of the disparity between the theories we preach and the theories that are implicit in our own behavior.

Research Orientation

Rudolf Dreikurs points out, in an insightful essay, that we are today in a period of change from an autocratic to a democratic way of life.[2] This is a development that has been in progress for hundreds of years. We have now reached a point where many, if not most, of us have accepted democratic modes of conduct as just and proper. At the same time, we have not been able to develop modes of behavior that are always consistent with our democratic ideals and instead

[2] *Character Education and Spiritual Values in an Anxious Age.* Boston: Beacon Press, 1952.

must continually fall back on traditional and more autocratic approaches. The latter are, after all, a part of our cultural heritage that goes back to our most primitive beginnings.

When we are confronted by a difficult and frustrating situation in our classrooms, the tendency is for us to want to exert our authority rather than to examine the situation critically in the light of our democratic ideals or research-oriented learning theory. It calls for a great deal of maturity and self-control to respond to frustration in ways that are likely to improve classroom learning, because our personal needs to take out our frustrations on our students struggle for expression. Furthermore, as Dreikurs points out, we are not even sure how to resolve difficult situations in ways that are consistent with our democratic ideals. This is true not only of difficult and frustrating situations, but of everyday classroom teaching as well.

We still have a great distance to go in finding ways to translate the findings of clinical and social psychology into classroom practice. Hence there are many individuals, the present writer included, who continually find themselves falling back on the traditional and teacher-centered educational methods of lecture, assignment, examination, etc. What we obviously need is a great deal more classroom experimentation in approaches that attempt to translate research-oriented theory into classroom practices that are consistent with its democratic implications. I refer here to the efforts of individual teachers to find ways to improve learning in their classrooms, as well as to the more rigorous experiments of the educational or social psychologist.

It will not be easy to conduct such experimentation. Laymen and colleagues alike whose learning theories are essentially traditional will object to any approach that to them seems inconsistent with common sense. And the recent attacks on education have not created a climate that encourages much experimentation, informal or otherwise. Such attacks increase anxiety, defensiveness, and insecurity, which in turn foster a resurgence of traditionalism. But it is easy to place the blame on others. When the opportunity for experimentation presents itself, our chief problem will be ourselves.

Our first task will be that of becoming aware of the ways in which our practice is at odds with our democratic ideals, as well as the principles that have evolved from research findings. This is a task that takes considerable insight and self-understanding, but it is a task that must be resolved if we are to develop learning theories and teaching practices that are more effective. If we are able to face our own deficiencies, then we will be able to move on to the creative thinking and improvisation that constitute the preliminary phases of experimentation with new methods.

NEW FROM ASCD . . . . . .

Selected Bibliography for Curriculum Workers 1959 Edition

92 pages $1.00

Curriculum Materials 1959

59 pages $.75

WARREN A. KETCHAM
RONDEAU G. LAFFITTE, JR.

How Well Are They Learning?

Longitudinal records of children's mental age and reading age in a school system furnish data with important implications for instruction.

HOW WELL are the children learning? This question outnumbers all others asked about children. For school systems which will expend the necessary time and energy, good answers can be secured. This article will describe what the School District of the City of Ferndale, Michigan, is doing through its testing program to provide teachers and parents with better answers to their questions regarding children's learning.

Development of Testing Program

The first district-wide testing program in Ferndale was organized in 1926. A standardized achievement test and a standardized mental ability test were used. In 1932 the program was discontinued and the use of standardized tests was left to the discretion of individual teachers. Reasons given for discontinuing the program were: dissatisfaction with the tests and the cost of the program.

In 1943, at the request of principals and teachers, district-wide testing was resumed in Ferndale. A standardized achievement test was given in grades four through eight and a standardized mental ability test was given in grades four, seven, and eight. Principals made a special effort to encourage teachers to use the results which were compiled and analyzed by the director of group testing. The reports to teachers emphasized the importance of a favorable comparison between class group averages and test norms. Frequent mention was made of the importance of corrective instructional procedures which would reduce the number of slow learners.

Nevertheless, test results continued to show what was to be expected in a growing school system: the number of children who achieved below test norms multiplied with each increase in enrollment. Achievement tests given in October 1948, revealed that the range in scores for fourth graders was from grade three to grade six. The range of differences in average achievement between schools was almost as great as the range of differences between pupils in a given school. Test data on seventh graders for 1948 showed a sharp increase in the range of differences in achievement over fourth graders for pupils and for schools.

By the late 1940's, analysis of an accumulation of a quarter of a century of test data revealed that neither a test-teach-test procedure, remedial instruction, the nonpromotion of pupils achieving below grade norms, or adjustment rooms for the mentally retarded, singly

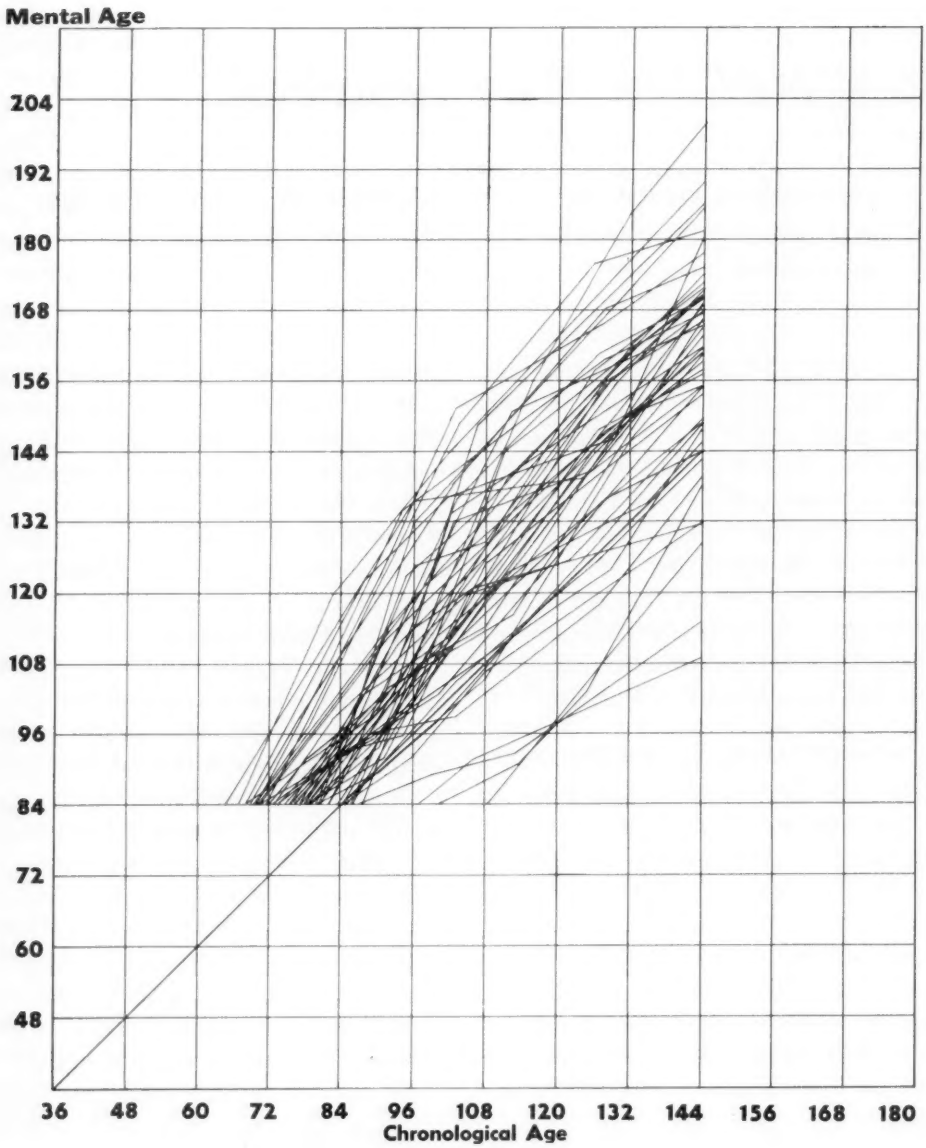


Figure 1. Individual Differences in the Longitudinal Records of Mental Ages for 50 Children

or in combination, had any demonstrable effect on the range of individual differences in learning. In the search for clarification and understanding, a clue was taken from longitudinal studies of children which had shown that learning for each child progresses with chronological age according to a unique pattern. This idea suggested the possibility that the problem of differences with which teachers had been wrestling could be traced to the nature of children and were, therefore, only partially amenable to teaching methods.

Revised Ferndale Testing Program

A longitudinal growth record is secured by testing the same child periodically through time with the same test. In 1951 the Ferndale testing program was enlarged so that longitudinal records could be kept of the physical, mental and academic growth for all elementary school pupils. The new program provided for the following system-wide testing schedule: in grades one and two a mental ability test and a reading test in October and April; in grade three a reading test in October and a reading test and a mental ability test in April; in grades four, six, and eight an achievement test battery in October; and in grades five and seven a mental ability test in October. The purposes of the expanded testing program were (a) to emphasize the extent and dynamics of individual differences in children's capacities to benefit from instruction and (b) to increase the effectiveness of teachers in assessing the individual needs of pupils as a basis for improving teaching methods and the curriculum.

The data which follow have been taken from a complete analysis of the Ferndale testing program which was completed in 1957. The analysis was made possible by a grant to the University of Michigan from the United States Department of Health, Education, and Welfare under the provisions of Public Law 531, 2d Session, 83d Congress. Discussion will be limited to the mental and reading test data.

Longitudinal Records of Mental Age and Reading Age

One of the few items which all children share without prejudice is the calendar by which their progress through life is measured. Consequently, chronological age is the most appropriate baseline for measuring growth. Since most standardized test scores are capable of conversion into age equivalents in months, a convenient and effective device for the graphic representation of longitudinal records is provided. The result is illustrated in Figures 1 and 2 which present the longitudinal records of individual differences in the mental ages and in the reading ages of 50 children. The graphs have been modified for discussion purposes. The lines have been drawn so they begin at 84 months, the mental age and reading age of an average beginning second grader, and they end at 144 months of chronological age, the average age at which pupils leave elementary school.

Figures 1 and 2 show, above all, how fantastically complex learning can be, even when considered apart from all of its emotional, social, and motivational overtones. Consider, in Figure 1, the differences in chronological age at which

***WARREN A. KETCHAM** is associate professor of education and psychologist in the University School, University of Michigan, Ann Arbor; **RONDEAU G. LAFFITTE, JR.** is a psychometrician in the University School, University of Michigan.*

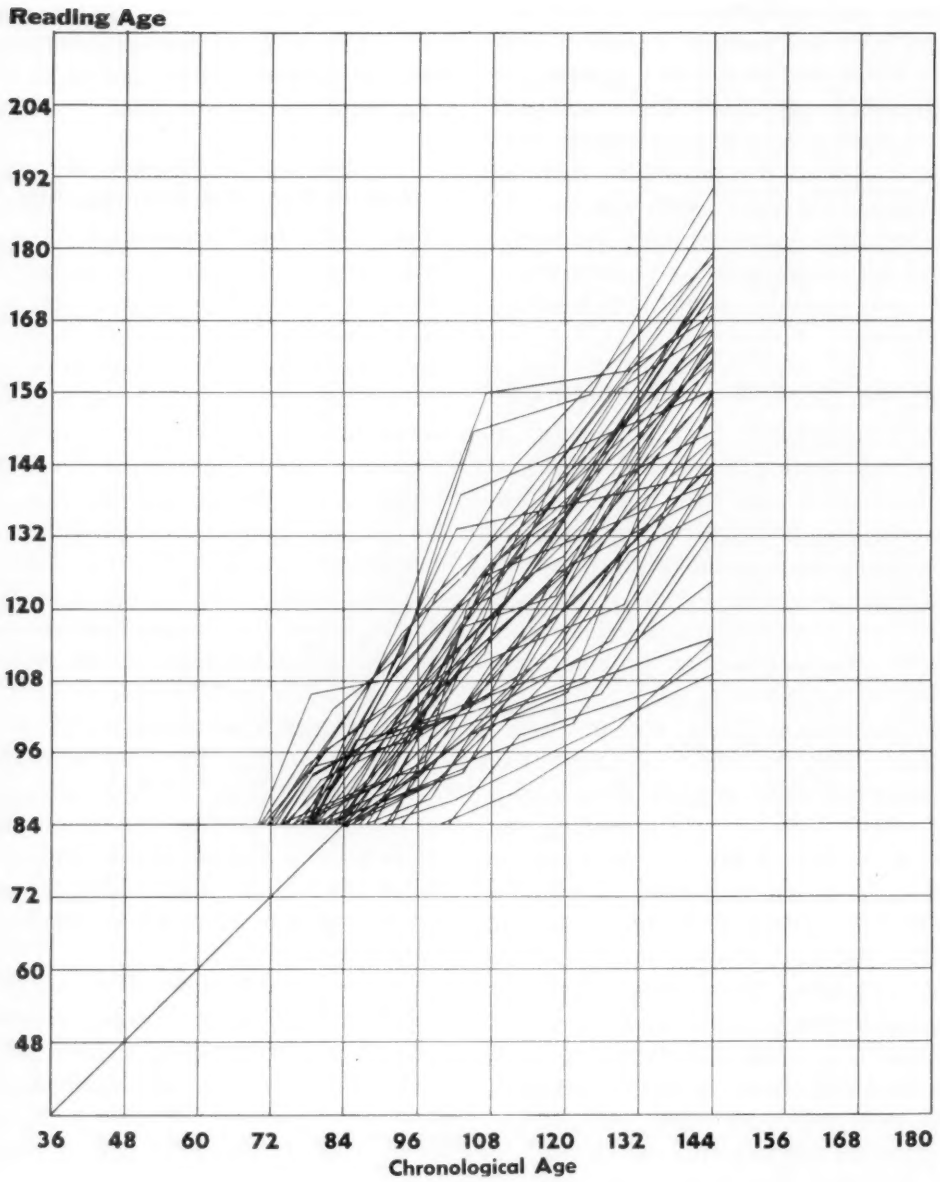


Figure 2. Individual Differences in the Longitudinal Records of Reading Ages for 50 Children

children in Ferndale can be expected to achieve a mental age of 84 months, the mental age of an average beginning second grader. One child has the mental ability of a seven-year-old when he is still only five and one-half and is presumably still in kindergarten. Another child does not achieve a mental age of seven years until he is nine years old and presumably in grade four. Individual differences in the mental ability of twelve-year-olds in Ferndale are equally impressive. The brightest child at twelve years has the mental ability of a typical sixteen and one-half-year-old who would ordinarily be in the middle of grade eleven. The least bright child at twelve years has the mental ability of a typical nine-year-old who would be found normally in grade four. A comparison of Figure 1 with Figure 2 reveals a high degree of similarity between individual differences in the longitudinal records for mental age and the longitudinal records for reading age. It is indicated from the evidence that individual differences in the age at which children learn to read and their achievement of reading skill are as closely related to their mental abilities as they are related to methods of teaching.

Each line in Figures 1 and 2 represents the progress of a child toward greater mental ability and better reading skill. Differences in the slope of the lines indicate that the children achieved their mental abilities and reading skills at very different rates. Consequently there was not the close relationship which might be expected between the age at which a particular child achieved 84 months of mental age or reading age and his rank in the group at age twelve; i.e., the last child to achieve 84 months of reading age and mental age was not the least bright or the poorest reader at age twelve. The individual records show that while some children began early and progressed rapidly and some began late and progressed slowly, other children began late and progressed rapidly and still other children began early and progressed slowly. In other words, some children catch up while others do not succeed in keeping up. These data must lead to grave doubts regarding the accuracy with which children's mental abilities and academic progress at the completion of elementary school can be predicted from their tested or observed performance in the early grades.

The most simple, obvious, and positive interpretation of the Ferndale data is that all children increase in mental ability and reading skill with age and schooling. While neither the wishes of all parents nor the satisfaction of all teachers can be met by any known method of instruction, there should be considerable comfort for all in the knowledge that all children learn when they are taught.

To summarize: The significance of the Ferndale records is their corroboration of existing knowledge about learning heretofore based largely on data on children in laboratory schools. Sufficient evidence is now available to support the following generalizations:

1. There is a wide range of individual differences in mental abilities and learning of children no matter how early they are tested.

2. The range of individual differences among children increases as their chronological age increases.

3. When the beginning of learning and the progress of learning are charted, the resultant longitudinal record shows a high degree of individuality in each child's progress.

(Continued on page 350)

BENNIE CARMICHAEL
DAVID TURNEY

Learning about Learning Through Cooperative Research

The college-public school experimental programs described in this article contain both broad and specific implications for learning about learning.

THE Peabody-Public School Cooperative Program, initiated during the summer of 1957 and supported by a grant from The Fund for the Advancement of Education, has as its primary objective an investigation of the ways that skilled teachers can extend the scope of their present influence on the learning activities of pupils.

A Cooperative Research Program

The problems selected for investigation have been proposed and defined within a working relationship established and developed by the staff members of George Peabody College for Teachers and the representatives of the cooperating school systems. These problems represent matters of vital concern to the participating schools, including the shortage of skilled personnel, the physical limitations of educational opportunities within school districts, overcrowding of existing facilities, and more effective use of materials of instruction.

In working toward the solution of these problems the role of the college has been both facilitating and advisory. The resources of Peabody College have been made available to the schools according to cooperatively developed plans of action in which the school systems have retained operational control of each project. The requirements of the college have been largely dictated by those factors necessary to an effective evaluation of the experimentation.

Within this framework eight separate research studies were initiated—all designed to improve the quality of learning for selected groups of pupils in the associated schools. Of these eight projects, three will be discussed here as they relate to the learning processes of the pupils affected by the experimentation.

Summer Sessions for Superior Students

During the summer of 1958, ninety-nine Davidson County, Tennessee, high school students were enrolled in specially designed classes of physics, chemistry, and mathematics.[1] Under the leadership of Professors H. Craig Sipe (physics) and John H. Banks (mathematics), outstanding high school teachers of mathe-

[1] "Specialized High School Summer Sessions." Research Bulletin Number 6. The Peabody-Public School Cooperative Program. Nashville 5, Tennessee: George Peabody College for Teachers.

matics and science were selected to teach in the summer sessions, and superior students were invited to attend. The instruction was provided in two high school centers, one in the western and one in the eastern part of the county.

Requirements for student eligibility included: (a) completion of the junior year of high school, (b) completion of three years of high school mathematics and two years of science, (c) superior academic achievement and ability, and (d) recommendation by teachers and principals. Instruction included topics in mathematics and science not in the present high school curriculum.

The specific goals of this project were concerned with the extent to which: (a) able secondary teachers could provide this type of instruction, (b) idle facilities and students could be brought together in a fruitful educational enterprise, (c) special curricula could be developed, and (d) students would respond to a challenging educational program without the inducement of credit.

In the course of the evaluation of this project, information was gathered which related directly to the learning processes of the students enrolled.

Students whose attitude questionnaires revealed a high degree of intrinsic motivation performed, in general, better than those whose interest centered on the more remote goal of college success. Chemistry students whose test scores fell in the lowest quartile indicated on attitude questionnaires that their purpose in enrolling was largely to review for college chemistry. A similar relationship was found to exist among the mathematics students. By and large, the poorest work in the mathematics class was done by twelfth grade students whose purpose was related to college preparation. The group that performed best was composed of six students who had completed the tenth grade and were given special permission to enroll because of high interest and ability.

Test results in the physics of electricity indicated that the students learned facts well but had difficulty in applying facts to the solution of problems. In the laboratory, students quickly developed manipulatory techniques. Consultants and teachers realized that this has important implications for the regular instructional program.

These findings suggest that attempts to develop special learning situations for talented young people should be based on a careful consideration of intrinsic motivational factors.

Team Approaches to College Teaching

Two programs attempted to enrich training experiences of graduate students and increase the productivity and effectiveness of regular professors. These programs were conducted at Peabody College during the 1957-58 academic year under the direction of A. Edwin Anderson, professor of English, and John H. Banks, professor of mathematics.[2] The programs were designed to develop:

1. A procedure which would assure a better utilization of regular staff resources and specialties to the benefit of a greater number of students.
2. A structure which would be sufficiently adaptable to lend itself to an expanding freshman load without diminution in the quality of instruction.
3. A format for an instructional program designed for the training of instructors of college freshman courses.

These projects yielded data indicating that parts of the instructional program in

[2] "Team Approaches to College Teaching." Research Bulletin Number 5. The Peabody-Public School Cooperative Program. Nashville 5, Tennessee: George Peabody College for Teachers.

***BENNIE CARMICHAEL** is coordinator of the Peabody-Public School Cooperative Program and a member of the faculty of George Peabody College for Teachers, Nashville, Tennessee. **DAVID TURNEY** is a graduate student at Peabody and research assistant with the Program.*

these disciplines can be presented to large groups of students without sacrificing the quality of learning and instruction. For the freshman English Communication course:

1. Eight classes of approximately 25 freshman English students met for three one-hour classes and one two-hour skills laboratory weekly.

2. Thirty demonstration classes were conducted at intervals throughout the year with units of students ranging from 75 to 100. These classes were taught by the five regular members of the English Communications staff, each member participating where his interest and specialty best suited him.

3. As a corollary to the other experiences of the student-instructors a seminar meeting for two hours weekly throughout the year was devoted to the task of giving these persons precise guidance with their own teaching problems and a critical examination of the operation of the project.

As a result of these experiences each student-instructor prepared an instructor's manual in which were assembled those materials—course descriptions, syllabi, tests, materials, bibliographical lists, text listings, descriptions, evaluations, and similar matter—which he normally would expect to need as he went into a teaching assignment elsewhere.

This program offered a powerful learning experience for the three assistants. The opportunity to try college teaching provided them a chance immediately to apply theories of teaching. The responsibility assumed made the experience realistic, and the supervision and assistance from the regular staff made it especially worthwhile from the standpoint of training. The results obtained during the course of the program were most heartening to both the student instructors and regular staff members, due largely to the fact that teaching and learning were made meaningful and effective through the contributions of instructors where their abilities best qualified them.

That the program was effective for students enrolled in the course was verified by results on the Cooperative English Tests, Effectiveness of Expression and Reading Comprehension, and the Brown-Carlsen Listening Comprehension Test. While students were unanimously in favor of this organization and two-thirds of them rated the demonstration classes and laboratory sessions as valuable or very valuable, they still considered the regular class sessions more important. Both readiness for participating in new patterns of teaching and more effective use of new activities may be needed and are being considered in the extension of the experiment.

Secretarial Help for Classroom Teachers

In Davidson County, Tennessee, instructional secretaries are being used to improve the effectiveness of classroom teachers by relieving them of clerical and routine secretarial duties.[3] This is being achieved by recruiting capable married women with secretarial ability who are willing to work a portion of the school day but are not available on a full-time basis.

[3] "Secretarial Help for Classroom Teachers." Research Bulletin Number 1. The Peabody-Public School Cooperative Program. Nashville 5, Tennessee: George Peabody College for Teachers.

One secretary is assigned to six teachers to perform a set of prescribed secretarial and clerical tasks usually performed by the teacher. The secretaries are not assistant teachers or classroom helpers. The experiment is designed to test the hypothesis that: Teachers can extend their creative teaching talents to pupils and markedly improve the effectiveness of their teaching when they are freed from the many time consuming, routine clerical and secretarial tasks which they now perform—tasks which someone must perform for each classroom in every well organized school.

Under the direction of Professors Roosevelt Basler and Theodore Woodward, evaluative instruments were designed and used during the first year of the program which yielded data indicating that important changes took place in the classrooms of the teachers thus served.

Among these changes was a marked increase in the amount and variety of instructional materials introduced into the learning situation. With the problem of ordering material simplified, large quantities of exhibits, pamphlets, films, and similar materials began to enter the classrooms of these assisted teachers. With a secretary to complete arrangements, field trips and other community resources were drawn into the field of experience of pupils in these classes.

Tests and practice materials prepared by the secretary for the teacher's use were increasingly aimed at individualizing the instructional processes. The help made available to the teacher seemed to make possible the production of individual assignment and evaluative material in quantities hitherto beyond the range of the teacher's time limitations.

Teacher-designed instructional materials in large quantities were constructed by secretaries. Arithmetic aids were prepared in sufficient quantity so that every pupil in a class could have his own set. Vocabulary cards for a reading text were mass-produced by a secretary and a complete set placed in each pupil's hands.

Most particularly, this service seemed to promote certain activities that provided for the pupils a strong reinforcement of their learnings. Class newspapers appeared in the rooms of teachers who had not used this activity before. Booklets of pupils' poetry, typed copy of pupils' own stories bound in booklet form and illustrated by the children, and similar materials were seen in increasing frequency.

A conclusive answer to the question—how do these changes in teaching practice affect the learning of children—is not yet available. However, evaluative statements made by classroom teachers who received secretarial help suggest that these changes in procedure do have potent effects on the learner.

Teachers devoted the time saved for them by the secretary's services to individual guidance and instruction. They reported that cases of marginal achievement had responded to this treatment and had made acceptable progress. Such instances were reported by both elementary and high school teachers.

Present evaluation of the continuing project is focused upon the classroom setting and is designed to explore the relationships between the provision of secretarial services and the nature of the learning experience of pupils.

Theory and Application

The experimental program partially described herein contains both broad and specific implications for learning about learning.

(Continued on page 372)

ALMA BROWN

Learning about Individualized Teaching

This study by a school system of its program for the gifted has important indications for the teaching of all children.

TO DISCOVER and make provision for individual differences in pupils is one of the most challenging areas in the field of education. Much research has been done to learn how to provide worthwhile experiences for individual learning, but further study is needed. Significant gains can be made by teachers working in their own classrooms to discover new approaches and techniques. In one school system an attempt is being made to look at the problem from many angles and to plan together for more individualized teaching and learning experiences.

District 110, Johnson County, Kansas, is a part of the Greater Kansas City area. In 1952 the patrons of two large elementary school districts decided to merge to provide better educational opportunities at a more equitable tax for the boys and girls in this area. At the time the two schools merged each was composed of kindergarten through eighth grade with a total enrollment of 2200. In 1954 the seventh and eighth grades became part of a large secondary school district when junior high schools were organized. District 110, a separate elementary district, now has 11 schools with a total enrollment of approximately 5400 boys and girls in kindergarten through the sixth grade. This historical résumé will show that the most pressing problems of the district have been to provide staff members and physical facilities to care for the great increase in school population.

Soon after the organization of District 110 the Board of Education established a policy of a 200 day contract for teachers—180 days in the classroom, and the remainder for professional work which includes one week for orientation at the beginning of each school year. This action was taken with the idea that teachers are not always credited with the many professional tasks undertaken in addition to regular classroom work. A number of approaches were used in attempting to make the professional days accomplish what the Board of Education intended and to meet the needs and desires of staff members. In conducting curriculum study it is most important that the incentive come from the entire staff and that each person work on the problem or problems which are important to him. J. Cecil Parker expresses the idea in this way: "People work as indi-

viduals or as members of groups on problems that are significant to them."[1] He goes on to explain that a problem becomes significant to an individual as he sees its relationship to some part of his system of values, and becomes involved in it emotionally as well as intellectually.

Curriculum Program

In the spring of 1958 the program and professional relations committees of the Teachers Association met with the administration to plan for the curriculum work for the 1958-59 school year. The Board of Education agreed to a proposal from this group that the professional days be credited, not by days and hours, but with the completion of professional responsibilities decided upon by the staff and evaluated by them. As a part of the plan, school is dismissed one day per month at 1:45 p.m. in order that all staff members can spend the remainder of the afternoon working on curriculum problems.

A Teachers Association questionnaire returned by all staff members indicated areas in which they wished to work. About 30 persons indicated an interest in learning more about classroom research and in using it to improve teaching techniques. Other groups had previously been working in the areas of science, arithmetic, reading, health and physical education, music and the gifted, and are continuing this year.

Building committees, working with their principals, and district grade groups have been concerned with needs of individual pupils and have worked together in many ways to provide worthwhile experiences to meet these needs. The social studies program in the sixth grade and work in the area of the gifted are examples of some of the work being done.

Working together, the sixth grade teachers devised a plan for teaching social studies from a variety of texts and other materials. The school district purchased the texts which the teachers selected, several copies each of five series, and a number of single copies, as well as an adequate supply of reference materials. The texts and other materials cover a wide span in difficulty to meet the reading needs of all children. In an average sixth grade class there will be a reading differential of several years, so it is important to have a wide range of material.

The teachers in this group hold a one-day workshop each year during orientation week. They have developed a tentative guide but teachers are free to vary the program according to individual needs and abilities. The pupils work individually and in small groups, trying to learn, not just facts, but the underlying factors and reasons. This development of critical thinking and ability to do research work is an important element of growth necessary for youngsters to work at the junior high school level.

Objectives of the social studies program as listed by the teachers are:

1. To develop an understanding of the cultures of the people in other parts of the world
2. To create an awareness of interdependency among the nations of the world
3. To help children look for the many things people have in common rather than stressing points of difference
4. To develop skills in the use and interpretation of maps, globes, charts, and other reference material
5. To develop skills in discussion and the presentation of materials

[1] J. Cecil Parker. "Guidelines for In-Service Education." *In-Service Education,* Fifty-sixth Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1957.

6. To develop skills in group participation by realizing responsibilities and privileges as a group member.

The social studies program in our sixth grades is quite inclusive. We find youngsters studying aviation and the space age, the International Geophysical Year in various parts of the world, what to eat on a trip to Morocco, how much it would cost to take a trip to Mexico or some other distant place. Each child is encouraged and challenged to progress as rapidly as he can with the many activities provided in this type program. Teachers find that this kind of teaching requires much preparation both for themselves and their pupils and it is more difficult than teaching from a single text. At the beginning of the year it is necessary to move slowly especially with some groups. Certain kinds of readiness are needed for work in small groups or committees to help pupils learn to accept responsibility for leadership and for self discipline. In evaluating the program both teachers and pupils feel that this is a most interesting and practical way to teach and learn and is worth the extra effort.

Program for the Rapid Learner

In the fall of 1956 a concerted study was begun on a program for the more rapid learner. A district steering committee was selected to work with the administration and with the committees which were organized in all buildings. A part of the 1957-58 report of the steering committee follows:

When the formal study of how to provide specific help for gifted children in this district was begun about two years ago, the reports of existing programs throughout the country were carefully considered.

In view of the organization and composition of our local schools it was decided that our first approach should be one of enrichment in the regular classroom rather than segregation of the gifted pupils.

There are innumerable forms of giftedness, but for our study and program we are working first with the intellectually gifted. Various authorities define intellectual giftedness as a mental capacity indicated by an intelligence quotient of at least 130 or 140. A group intelligence test is not a completely reliable measure of ability. To be sure to include all who might be in the gifted range, we set our base at 120. According to group tests, there are over 600 students in District 110 with a 120+ I. Q. Our committees selected arbitrarily about 10% of these as a "pilot group" for careful study and work. We expect to expand the program to include all intellectually gifted.

A. Objectives

1. To identify pupils of superior potential, and make sure that teachers are aware of their capabilities

2. To insure, in our teaching, that these children are stimulated to work to the limit of their capabilities

3. To give teachers aid in planning programs and securing adequate materials that they may teach these children better

4. To help locate, develop, and make available to teachers, those types of projects which most nearly fit the needs of superior pupils

5. To devise an improved method of sharing enrichment ideas among the schools of the district

6. To inform the public of this program for the gifted, and promote their better understanding of its operation.

B. Procedures

1. Organizational procedures
   a. Central steering committee
      (1) Formulates over-all plans
      (2) Reports and shares ideas and

ALMA BROWN is curriculum coordinator, School District 110, Overland Park, Kansas.

accomplishments of schools in District 110

(3) Distributes information about other studies and school systems

b. School committees

(1) Regular meetings in buildings

(2) Share enrichment ideas

(3) Discuss special cases

(4) Distribute information

2. Identification procedures

a. Group intelligence test scores (examining first all those with score of 120 or above)

b. Examination of achievement test scores with special attention to those over two grade levels in advance of present location in school

c. Teacher's recommendation based on originality of response or thinking or evidence of unusual talent or ability in a special field

d. Individual Stanford-Binet test

3. In-service procedures

a. Special consultants

(1) J. Cecil Parker, School of Edcation, University of California, Berkeley, lecturer and consultant

(2) Elizabeth Drews, Department of Teacher Education, Michigan State University, lecturer and consultant

(3) James Marshall, Kansas State Director of Special Education, testing and consultant work

b. Special meeting and workshops

(1) Delegates attended state meeting in Lawrence in May 1957 of schools working on state program

(2) Six members attended workshop at Kansas University in summer of 1957

(3) Delegates attended sessions of International Council for Exceptional Children in Kansas City in April 1958.

C. Accomplishments

1. Building committees

a. Teachers have shown increased understanding of the possibilities of special interest projects and are looking more carefully at the results

b. A case study file has been developed on all children in the pilot group; some schools include others than just those given individual tests

c. Many projects have been worked out in the schools, and mimeographed materials shared with other buildings in the district

d. Some small special interest groups have been established this year and many more are planned for fall, meeting with teachers who have special talents, interests, or abilities

e. Reference libraries of current books, periodicals and newspaper articles are being built up, in the central office, and in each building.

2. Individual

a. During the year 87 boys and girls were given individual intelligence tests using the Stanford-Binet. Forty-four were also given parts of Wechsler Intelligence Scale for Children. The I. Q. scores on the Stanford-Binet ranged from 122 to 170+ with the mean of 144.6. On most of the children in the pilot group, achievement test records are available for at least the past two years. In surveying enrichment work done in classrooms during the year, the building committees studied all special folders of the pilot group. Portions of those records devoted to descriptions of projects and procedures ran into several hundred pages. These projects covered the whole scope of the curriculum. They included special work in arithmetic, social studies, creative writing, creative dramatics, science, art and more than a dozen other closely related areas.

D. Suggestions and Recommendations

1. Place the identified superior children more than one to a room in order that they may challenge one another

2. Encourage each teacher to follow an individualized type of teaching with his one

or two most capable students regardless of formal identification

3. Explore the idea of using the committee within each building as a panel to discuss individual programs with teachers having gifted children in their classes

4. Standardize the forms to be used in gathering information on gifted children, and define more carefully the way anecdotal records should be kept

5. Encourage all teachers who have gifted children in their classes to work more closely with the gifted committee and share more in activities and planning

6. Expand the idea, developed in several schools, of setting up small clubs or seminar groups around special interest areas for gifted pupils

7. Work out a more effective system of communication between the buildings, thus enabling all to benefit from shared ideas, projects and resources

8. The Steering Committee should develop more extensive policies for working with teachers, parents, and lay groups in this program

9. Develop further a program for bringing parents of gifted children into the planning

10. Continue in-service training of teachers, stressing the work of specialists brought in for consultation

11. Locate and secure more usable materials for gifted students on appropriate levels in the fields of their interests

12. Continue the collecting of study materials in the central office available for teachers' reading

13. Work toward the time when a specialist will be available to help teachers identify the gifted, study their abilities, plan their program, and secure needed materials.

A school psychologist has been added to the staff this year whose chief responsibility is further testing and counseling with this group of children.

Our study of the gifted has had a marked effect on the teaching of all children. In identifying children who are intellectually gifted, a great interest has been created in identifying special interests and talents of other children. It has also led to a careful examination of the curriculum and exploration to discover where individualized teaching can be utilized. A number of teachers in the group which is studying classroom research this year are working on specific problems in the area of the child who seems not to be achieving at the level of his potential. Some are approaching it from the angle of social adjustment. This is a field which needs careful application of what is already known and more research to assist teachers and administrators in curriculum planning.

Even though the entire staff feels it is just beginning, it seems as if one of the greatest values gained is that everyone is involved in the study. There is continued professional growth as each person assumes his responsibility in some phase of the program. Curriculum study should never be considered an added chore, but an opportunity to do better the most important work of all, helping children grow, physically, emotionally, socially and intellectually.

How Well

(Continued from page 341)

Let there be no doubt as to what is being said. This is the way children really learn, no matter where they are found and no matter who teaches them. The major problem facing teachers is not how to eliminate individual differences, but rather how to cope with them.

JEAN FAIR

A Comprehensive High School Studies Learning

A continuing local school investigation of learning can furnish evidence upon which to build better programs.

EACH DAY through the doors of Evanston Township High School comes a stream of some 3500 students, virtually all of the young people of high school age in the community. In many respects they are much alike and, indeed, like high school students elsewhere. Still there are striking variations in their interests, backgrounds, abilities, maturity, and more. No one or even two or three programs in this comprehensive high school could advantageously serve all of them—and most surely not all of their fellow students in other schools.

The suburban community in which the school is located has long been willing to support and interested in good education. The school has a large physical plant with facilities of many kinds. Teachers and counselors, by and large, are competent and alert, attracted to the school at least in part by professional opportunities. Traditionally standards for student achievement have been high in both conventionally academic and nonacademic areas. A long history of trying out ways of improving educational offerings, coupled with the interest of a strong administrative staff, has created a friendly climate for experimentation.

Such projects have been based upon research and theory reported by others, but with an eye to extending and enriching their meaning and to making them applicable in a particular school which, while not wholly different from other school situations, has some unique characteristics. No effort is made to report all of these studies here, but enough is given to indicate directions.

Study of High Ability Students

A persisting interest in programs for students of high ability led to a 1956 Survey of Attitudes toward Self and toward the School.[1] Learning is influenced by the kinds of self-concepts which individuals hold and by their perceptions of learning situations. From this survey data the staff found that students of high ability and high achievement saw themselves "favorably" in four sets of characteristics: personal, such as "appearance" and "sense of humor"; self-reliance, such as "making

[1] The development of inventories on School and Self-Attitudes and their summarization and interpretation were based upon extensive interviews done at the school, but were largely the work of Miriam Goldberg and Harry Passow of the Horace Mann-Lincoln Institute of School Experimentation, Teachers College, Columbia University, New York.

decisions" and "carrying out responsibility"; special talents, such as social or athletic or artistic ability; and intellectual, such as "solving problems" and "thinking clearly." These students perceived themselves more favorably than did underachieving high ability students, high achieving average ability students (overachievers), low ability low achieving students, or a random sample of the general school population.

Characteristics which high achieving high ability students valued were, in general, characteristics which other kinds of students aspired to. Indeed, the other four groups, particularly the most representative random school group, desired high intellectual ability as much as, or even more than, social ability or athletic ability, although these latter two ranked at the top of seven kinds of abilities.

Moreover, these very able students considered as most important of the school's roles a cluster which may be called academic, such as "preparing for college" and "developing new ideas and learning to evaluate ideas critically," the same roles which they saw the school fulfilling most adequately. They perceived their parents as more satisfied with the total school program than did other groups and more willing to treat them as mature and independent in educational matters.

Other survey data showed that the high ability high achieving group had not only a high level of aspiration but also the greatest satisfaction with themselves (the lowest discrepancy between their perceived and "wished-for" characteristics) of all the groups mentioned above.

These very able students reported at the same time their preference for classes which offered "challenge," a "comfortable and satisfying class atmosphere," and interest; ease of difficulty in subjects explained their preferences less consistently. These same young people who saw themselves as self-reliant and intellectually able also reported a belief that they learned better in a structured, teacher-directed, regularly evaluated situation than in one in which there was more flexibility and self-evaluation.

Members of the faculty asked themselves what this evidence meant for school learning. The data reassured the staff that the total school situation encouraged the very able to achieve at a high intellectual level and developed in these young people a fairly realistic picture of their own abilities, one which the staff thought desirable and productive of continuing achievement. These students seemed ready and able to learn more effectively in situations requiring more independence and self-direction. Such a change was, of course, not made all at once. However, there has been a steady encouragement of more long-term assignments, more independent investigation of self-chosen problems, and more emphasis on making deeper relationships among the basic ideas of units.

From the same survey, staff members looked at data about underachieving high ability students. They perceived themselves somewhat more positively than did either the random school population or the low ability low achievers. Still these underachievers, who saw themselves not significantly different from high achievers on personal characteristics and

***JEAN FAIR** is associate professor of education, Wayne State University, Detroit, Michigan. Dr. Fair was formerly director of testing and research at Evanston Township High School, Evanston, Illinois.*

special talents, appraised themselves as less able in intellectual qualities and in some aspects of self-reliance. They showed the least satisfaction with themselves of any of the groups and significantly less than did high achieving students of similar measured intelligence.

The school's primary roles, according to underachievers, are academic; these are much more important than developing personal or social competence. Underachievers were less satisfied with their school situation than high achieving students or the random school population. They saw their parents as more satisfied with what the school expected than with their achievement and as bringing more pressure on them to achieve.

Evidence from several school studies has shown these students as achieving more or less at an "average" level, rarely failing or barely passing, but rarely achieving at a high level. Occasionally they have been high achievers in some one subject area, but more often not. They have almost always begun to underachieve by the ninth grade and almost always persist in this pattern throughout high school. Less often leaders or members in school or out-of-school organizations than high achieving students, underachievers wished for more such opportunities.

In numbers these students are only a very few of the school's population. Still the faculty has had much interest in them. They have great potential, but are somehow at odds with themselves and their world. Placing them in the more challenging learning situations of honors classes had already been tried, but with little evidence of either greater achievement or a change in self-appraisal.

The staff thought that some one kind of learning situation might be more helpful to them. Teachers tried out three, developed from beliefs commonly held: that underachievers might do better if (a) the teacher took a friendly interest in them as persons without exerting pressure to achieve and within flexible learning situations, (b) the teacher was impersonal but exerted pressure to achieve in a rather tightly structured curriculum, or (c) the teacher maintained a friendly, personal interest but still exerted pressure to achieve in a structured situation. None of the three groups of teachers, each trying out one of the three kinds of situations with underachievers specially assigned to them, saw much evidence of success, nor did the year-long patterns of marks suggest improvement in learning. Something beyond what is possible in classroom situations seemed needed.

At about the same time, several six weeks' series of group therapy sessions, discussion groups as they were called, were set up for ninth graders.[2] Enrollment was voluntary, although few refused.

Parents consented to their children's joining a group, and, as a matter of fact, held two discussion sessions of their own. Although the original plan called for bright students who had emotional problems they were unable to deal with, these students were, as it soon became apparent, largely underachievers of high ability. This total group was matched with a group of similar measured intelligence but not identified as having overly troublesome emotional problems. Group sessions were carried on by a professionally trained person and observed over closed circuit television by a few staff counselors, also professionally qualified, who then analyzed and

[2] The project was developed and carried out largely by Merle Ohlsen and Fred Proff of the University of Illinois, but in cooperation with their own graduate assistants and Evanston Township High School staff members.

evaluated the sessions in expectation of later conducting similar ones.

Results of Study

At present not all of the data have been finally summarized and interpreted. However, observations of professional participants and the testimonials of participating parents led the staff to believe that help in dealing with emotional problems or in clarifying self-concepts is worth further exploration.

Probably the normal school channels of more challenging classes, a school situation which values and expects achievement, or more helpful daily classroom situations have taken care of most of those who might have been underachievers. Those who do underachieve are not taken care of by these means.

Consequently, similar group counseling sessions are now carried on in one of the four large divisions of the school. In another, extensive individual counseling, again by professionally trained counselors, replaces group counseling. In a third division a special "class" is set up to give students special help with study skills in organizing and work habits, some group counseling, and some individual counseling. In the fourth division no special provisions beyond the ordinary counseling available to all students are to be made. The four systems are to be compared.

Still another offshoot of the projects here described was a growing belief that little was actually known of the basic sources of underachievement. Several members of the staff have begun a psychological study[3] of a small group of high ability underachievers with the purpose of looking for attitudes toward authority, self, and school through a series of projective tests and case histories. At the time of inviting selected students to participate, they were told that participation was entirely voluntary and that an individual interpretation of results would be made to anyone who asked for it. The eagerness with which these students accepted the invitation suggested that this study is properly directed toward basic emotional problems. Staff members have believed for some time that the use of the term "underachiever" may be more confusing than clarifying. Perhaps the proper course for the school is not that of changing the classroom learning situation of these young people but of providing the kind of counseling which helps students to free themselves of restrictions upon learning, to be open to learning. Perhaps this will be a proper course for underachievers of average or of lesser ability.

None of the projects reported here has been recounted in its entirety. Moreover, this article might have reported another series of investigations which have stemmed from the use of closed-circuit television. These were centered about new classroom structures for learning activities and about the kinds of activities most appropriate for growth in several kinds of learning. Studies are not to be ended, but are to be thought of as parts of a process of studying.

What the school has found from such studies can not be readily generalized for use in other schools, and not always even for all of its own students. Such a statement merely points up the need for continuing local school investigations of learning. They furnish evidence upon which to build better educational programs and to give both stimulation and security to a school staff, its students, and its community.

[3] With the help again of Miriam Goldberg of the Horace Mann-Lincoln Institute of School Experimentation, Teachers College, Columbia University.

MARGARET GILL

A Look at Secondary Education Methods Courses

Do instructors of secondary education methods courses "practice what they teach"?

AT THE beginning of this century attention to professional preparation of secondary teachers was largely concerned with their acquisition of subject matter. At that time the theory of formal discipline advocated tough mental gymnastics to train the faculties of the mind. Knowledge of subject presupposed ability to teach; therefore, techniques and problems of teaching were not included in the curricula of prospective high school teachers. Beginning high school teachers, leaving the liberal arts colleges and universities without professional training in the art and science of teaching, were following the most recent guides they had, examples of teaching methodology set by their professors.

The examples of instruction set by his college professors are sure to influence the neophyte, even though specific attention is now given to developing his skill in teaching ability. There probably exists some relation between quality and extent of the formal academic and professional training of teachers, on the one hand, and their initial adjustment and in-service growth on the other.

Identifying Teachers

It is reasonable to assume that teachers of education courses should be expected to exemplify desirable patterns of instruction. These experienced educators should not only help prospective teachers learn more effectively while pursuing their own college programs, but they should also help them leave college better equipped to handle both the subject matter and the youngsters of their future high school classes. It may be assumed, also, that those instructors of education who are recognized as superior teachers are wielding strong influence on the quality of teaching which is to be found in secondary schools.

To understand better the contribution of these superior instructors, an analysis was made of the manner in which they conduct a course from the initial planning of content and selection of instructional procedures to the final evaluation.[1] The analysis was concerned with the manner in which courses are taught by teachers named by their administrative officials as superior teachers, in charge of four basic education courses which are commonly found in undergraduate teacher training programs of prospective secondary teachers. Over 100 universities

[1] Margaret Gill. *Procedures Used by Superior Teachers of Secondary Education.* Unpublished Ph.D. dissertation. Austin: The University of Texas, 1956.

and colleges noted for their teacher training programs were selected as the basis for choosing the superior instructors. Two hundred instructors participated.

General Methods Course

One of the courses examined was secondary curriculum, or high school methods, the basic course in secondary methods, whatever the title might be. Four aspects of teaching this course were analyzed: general class organization, over-all planning (content, objectives, course requirements), instructional procedures (frequency of use of those selected and reasons for use), and evaluation (of the course, student and instructor). The final portion of the study was concerned with how the course is related to current practices in secondary schools.

Plan of Organization

General methods instructors favored generally a unit kind of class organization with units developed progressively throughout the course, rather than an inflexible type of organization which is characteristic of pre-arranged syllabi, textbook centered or daily lesson approaches. However, there were descriptions ranging from textbook centered to problems approach. These same instructors considered their classes to be informal, although not one described his class organization in ways that would indicate it was extremely informal.

Over-all Planning

Even though preferences slightly favored independent planning of content by individual instructors, there was considerable cooperation when several different people were teaching sections of the same course. Suggestions from students of areas of interest were often sought at the first of a semester, but the suggestions were generally limited to minor aspects of specific areas already selected by the instructor.

Objectives for the course were most frequently selected by the instructor in advance of meeting the class. However, considerable setting of objectives was done cooperatively with other instructors teaching sections of the course. Little planning was done in cooperation with students. When student suggestions were utilized, generally they were confined to the selection of relatively unimportant, minor details, after the over-all objectives had been determined by the instructor. Yet the methods course is where would-be teachers are to learn how to carry on teacher-pupil planning.

Course requirements were determined in advance with student reactions sought at times relative to somewhat unimportant aspects of the course.

Instructional Procedures

Procedures were varied during a semester more often because of changing needs of the class than because of the maturity or ability of students. Instructors selected teaching procedures when they first knew they would teach the course, rather than waiting to meet the class or obtain information about the students. Few changed procedures in order to illustrate different types of teaching methods, which constituted a significant part of the subject matter of the course.

The procedure used most frequently in the methods course was *discussion.* The chief reason given for use was the

***MARGARET GILL** is associate secretary, Association for Supervision and Curriculum Development, NEA.*

opportunity to emphasize expression of students' opinions, a practice which obviously belongs in a course devoted to consideration of teaching procedures. Although discussion seemed to be recognized as contributing to the development of critical thinking, it was not valued as a procedure which increased learning of subject matter. Neither was it considered of value in helping future teachers acquire such concomitant learnings as tolerant attitudes and skill in oral expressions, advantages often attributed to the discussion method. *Informal lecture* was the second most frequently used procedure.

When a *student panel* was used, although very infrequently, its use was justified by the values which resulted for those who participated in the panel presentation, rather than as a means for increased learning by the entire class. Developing ability to organize resource materials was not considered a valuable reason for use. *Student reports*, also, were used infrequently because the advantages were not for the entire class. When students presented outside material, it was limited to interesting information which might otherwise be omitted, rather than the fundamental subject matter of the course. Reports were not considered helpful in motivating students or arousing interest in the subject.

Projects provide practical orientation to the teaching profession, according to reasons given for use. However, this kind of learning experience was considered to be of little value when defined as working with youngsters, making special visits to youth centers, the "Y," etc., or constructing teaching materials. Failure to use projects, such as the three types mentioned, seemed more often to be the result of the practice in many colleges and universities of restricting certain learning activities to education courses other than the general secondary methods course. Construction of teaching materials was especially neglected. When projects were a part of the course, they were usually left to the initiative of individual students and carried out on the student's own time.

Although there was expressed recognition that *written reports* increased subject matter understanding and developed the ability to locate and organize data, there was little use of this activity. Written reports did not seem to increase interest in the subject, or to enrich the course for even the better students.

Examinations, used for the most part infrequently and at irregular intervals, provided a basis for evaluating the work of students. Increased learning was not one of the values of examinations. Neither were the results used for additional planning of the course.

Resource people were seldom used although they were recognized as sources of current, practical information about the teaching profession which would not be found elsewhere. It seemed to be considered undesirable for students during the period of pre-service training to become acquainted with teachers or administrators who are active in the profession.

Data relative to the use of *audio* or *visual materials* indicated their infrequent use in spite of the fact these aids to learning were recognized to be strong motivating factors and effective for presenting the subject matter. Even though the course being examined is concerned with methods of teaching, these two kinds of instructional materials were not used with any particular attempt to demonstrate their effectiveness as aids to teaching-learning.

Individual attention was available when students with learning problems needed help and also when the causes of learning difficulties needed to be discovered. However, individual instruction was not emphasized for students experiencing difficulty and not mentioned as an advantage for the fast learners. Activities involving individual students or small groups of students were used infrequently because the values were only for the small number involved.

For the most part, according to the data, the secondary methods course consists of informal lecture and discussion. Perhaps it might be expected that more kinds of instructional procedures would be used for illustrative purposes in the course where general methods of teaching is the subject matter. A majority of the instructors found to be most satisfactory those procedures that are informal and involve the entire class. However, a majority of the instructors did not name a teaching procedure they would consider most satisfactory.

Evaluation

Evaluations of the course were most often unstructured, informal and verbal, becoming a part of the general class discussion. If evaluations were in writing, instructors seemed to prefer them unsigned. Evaluation of instructors was objected to because of the attention focused on one aspect of the teaching-learning situation to the exclusion of other pertinent factors. Instructors assumed the entire responsibility for evaluation of the student. Conferences for evaluation purposes were held only with students doing poor work. Student participation in evaluation seemed to be limited to evaluation of themselves or each other only at the time of oral reports, panels or group activities. Student-teacher cooperation in evaluation was practically nonexistent.

Relating the Course to Current Practice

The methods course is related to what is taking place in the secondary schools most often through use of illustrations, examples and references to high school subjects, supplied by the instructor, taken from the text or from readings and experiences of students. Participation in activities with high school age groups or observation in high school classes was limited. This implies a classroom centered approach to the secondary methods course influenced by the instructors' experience and the text, rather than based on current secondary school activities.

Information about Students

In general, academic background and professional interests were the kinds of information recorded about students. Personal data sheets usually supplied this information, although maintenance of regular office hours with students encouraged to visit was a fairly common way of obtaining information.

Studies of College Teaching

Perhaps these findings should not be regarded as discouraging when an examination of the professional literature of education since the beginning of this century reveals that almost no attention has been given to college teaching. Little detailed, documented information exists about any methods of college teaching *per se*, and even less about secondary education courses and methods used by the teachers of these courses.

There appeared in 1927 one of the first recognitions of the role of professors of education. G. H. Betts asserted what was

to appear increasingly when he reported a study by instructors of Northwestern University's School of Education. He stated that the professors of education were only average in general effectiveness and presentation while at least theoretically the best teaching in a university should be found in its School of Education.[2]

At this time most colleges and universities were in the embarrassing position of prescribing work in teaching methods for their students who intended to teach, yet for which methods the majority of the faculty had no real sympathy. However, the role of professional education was beginning to be recognized both favorably and unfavorably.

In 1932 Lester Rogers directed a word of praise and criticism toward the teaching of professors of education.

> While men in education have been instrumental in effecting marked changes in the work of the kindergarten and the elementary schools and somewhat less significant change in the work of our secondary schools, they have, in their own work, more frequently followed the traditional university practices rather than change their procedures to conform to the principles that they have helped to make effective in our public schools.[3]

From 1940 to 1950 there seemed to be a decrease in interest in instructional procedures, education courses and their instructors. No efforts appeared to represent concerted attempts to examine any part of college teaching. Departments of education followed the example of other departments; they, also, failed to examine their instructional procedures.

However, in 1950 there appeared an increasing and widespread interest in appraising college teaching, which was reflected in a report issued by the Committee on College and University Teaching of the American Association of University Professors. Ruth Eckert recognized the importance of this report in the statement:

> The widespread search today for valid means of appraising college teaching is a highly encouraging sign, for it shows that we are thinking more realistically about our education problems.[4]

Earl Kelley expressed optimism regarding methods:

> We seem to be coming into an era of method. There are signs all about the country that people are becoming interested at last in how we put beliefs into action.[5]

In the study of secondary methods courses and also in the professional literature, it seems quite evident that teachers of education have failed to assume the lead in exemplifying ideal teaching procedures or considering ways to improve teaching. However, changes in contemporary society are making it necessary for instructors at all levels and in all areas to examine their teaching procedures and evaluate new media, new instructional procedures, and new subject matter. Interest in college teaching seems to be now at an all time high, if the quantity of material being published in the professional periodical literature is a true indication. However, as was true at the beginning of the century, too much that is being written is general in nature and still frequently represents

[2] G. H. Betts. "College Students' Reactions to Education Courses." *School and Society* 25:494, April 23, 1927.

[3] Lester B. Rogers. "The Place of Schools of Education in the Program of Improvement of University Instruction." *School and Society* 36:262, August 27, 1932.

[4] Ruth E. Eckert. "Ways of Evaluating College Teaching." *School and Society* 71:65, February 4, 1950.

[5] Earl C. Kelley. *The Workshop Way of Learning*. New York: Harper and Brothers, 1951, p. xii.

(Continued on page 367)

Only

Rand McNally

could publish

a handbook of map

and globe usage

because
Rand McNally is the only
publisher of both Social Studies texts
and maps and globes

THE RAND McNALLY HANDBOOK OF MAP AND GLOBE USAGE

Thousands of teachers asked for it . . . hundreds of teachers helped to write it . . . now it is here.

This handbook will serve as your standard teaching guide to maps and globes from kindergarten through twelfth grade. It shows you exactly what to do and how-to-do it in every grade. It shows you how to introduce each map, what concepts should be gained, what skills are to be acquired or used on the map, and presents the activities necessary to good learning. It is usable with any publisher's maps and globes.

It is divided into separate grade levels because map reading should be as carefully taught in grade sequence as other reading skills are.

Now you can really learn how to make the most effective use of visual presentation through maps and globes in social studies and science courses.

400 pages—Publication 1959—Price $2.00 list—$1.60 net.

Ask to see a copy of this long-awaited how-to-present HANDBOOK OF MAP AND GLOBE USAGE, sent on ten day approval.

Rand McNally & Company

P. O. Box 7600 Chicago 80, Illinois

The Rand McNally

Blended Social Studies PROGRAM

was created

TO HELP YOU DO THE JOB YOU WANT TO DO . . .

TEXTBOOKS: The content of the books has been organized to fit the child's maturation level. Motivation and built-in aids, workshops that are *fun*, a multitude of maps and striking pictures in both black-and-white and in color, pleasant and interesting style for easy reading—these are only a few of the features designed so that you can teach the basic learnings of the social studies.

ALL AROUND AMERICA (United States readiness)
AROUND THE HOME (local community studies)
MANY LANDS (world and United States communities)
WITHIN OUR BORDERS (United States)
WITHIN THE AMERICAS (North and South America)
BEYOND OUR BORDERS (Canada and Latin America)
BEYOND THE OCEANS (Europe, Asia, Africa, and Australasia)

TEACHER'S MANUAL
WORKSHOP
TEACHER'S BOOK JACKET
WALL MAPS AND GLOBES
FILMSTRIPS
ATLAS *are all part of the Program.*

Would you like to see copies of the textbooks for evaluation? If so, please write

RAND McNALLY & COMPANY · Box 7600 · Chicago 80, Illinois

Remember . . . YOUR Rand McNally Field Representative is a trained professional educational consultant.

ELIZABETH PARKER
and CURRICULUM COMMITTEE

Teachers Study Use of Bulletin Boards

Using an action research approach teachers study the educative uses of bulletin boards and draw some significant conclusions.

SINCE bulletin boards are widely used as a visual education tool in the classrooms in Cedar Grove, New Jersey, the teachers were anxious to find out how their use affected children's interests, learnings and development. Can we make bulletin boards more vital for improved learnings and achievement? Are the pupils actually aware of our bulletin boards in the classrooms and halls? Do pupils gain anything in their work as a result of intensive use of bulletin boards? A consideration of these questions led to a formulation of the problem and the launching of our program. The original problem was stated: Does the display of children's work in the classroom affect their growth and development?

The following summary describes 18 months' work with a core group of supervisors, principals and teachers in an action research study. A consultant was available from time to time and we think provision of such advisory service is mandatory for any group starting a project in action research.

Assumptions

We began with several assumptions about bulletin boards and their relationships to learning. Assumptions help to establish the educational premise that we use as a basis of our work. These were:

1. Children learn nothing from having their work displayed.
2. Work on bulletin boards affects their status in the group.
3. The displaying of children's work affects their behavior.
4. Working on bulletin boards establishes self-esteem.
5. Work on bulletin boards motivates children to do better.
6. Use of bulletin boards has no effect at all.
7. Bulletin boards should always be artistically arranged.
8. Bulletin board work creates appreciation of a good arrangement.
9. Work on bulletin boards creates appreciation of others' work.
10. Bulletin boards are a teaching device.
11. Visitors often judge a teacher by the appearance of work displayed in her room.
12. Using bulletin boards will teach children how to organize material.
13. Labeling material makes displays more effective.
14. A child learns more from bulletin boards he has made himself than from commercial or teacher made displays.
15. The teacher's enthusiasm for displays motivates children's initiative and interest.
16. Learning about good displays and

using them will carry over into future classes.

17. It is better to have an artistic or well organized bulletin board than one that is too crowded.

18. Bulletin boards have an effect on children's standards.

It was an easy task to make early assumptions. The data collected seemed to support these assumptions.

We needed also to collect data concerning the actual uses we were making of bulletin boards. Evidence proved to be varied as different teachers conducted experimentation in their classrooms. Teachers began to record anecdotes of children, school personnel and visitors. They made closer observations to watch how children related themselves to bulletin boards. One put up commercial displays without comment, one stripped bulletin boards, another planned to have other classes visit her room and summarize their learnings or opinions about the projects of her class. The following incidents were related by various members of the committee:

1. One kindergarten teacher keeps the class aware of bulletin boards through constant reminding, since the displays are rather above the children's eye-level. As a unit progresses, it is likely that more of the children's work will replace things that the teacher has put up. It is often through the children's own requests that their work is exhibited. This teacher also believes that her bulletin boards are very helpful during parent-teacher conferences.

2. Children in a first grade became aware of Queen Elizabeth's recent tour only when they began bringing in their own newspaper articles about it. Previously displayed articles on the very same subject, brought in by the teacher, had gone unnoticed.

3. Comments overheard by a first grade teacher showed that the children were extremely impressed with the color in a group of first grade paintings.

4. Visual material (pictures) displayed at the beginning of the year in a fifth grade classroom that had been arranged by the teacher, in the hope that they would make the room more attractive, received little or no response from the children. However, as the students required more bulletin board space for their own displays, they requested that the teacher's exhibit be removed. To get a reaction from the children, the teacher said that her exhibit could not be moved. The children's request for the additional space became more adamant.

5. One teacher observed that a child who was arranging a hall bulletin board of class paintings was consciously aware of the "design" of her arrangement. She purposely chose a certain number of paintings to display and, when questioned, answered that any more would "unbalance" the effect she wanted to create.

6. A sixth grader wanted to rearrange a bulletin board in a better way. "Can't we change the stale stuff?" she asked.

7. A fifth grade teacher carried on an experiment, aimed directly at our problem. In social studies the class made an extensive study of the Westward Movement in the U. S., creating maps, pictures and projects. At the end of the unit the class evaluated its own work and also invited other classes in to view and evaluate it. These are the results: Most of the class felt that they had accomplished their purpose—to show the growth of the country. The work was neat and the class had followed the directions as set up in the planning. They felt more had been learned by making the displays and sharing them with others. They acquired additional information as displays were explained.

Other classes that visited made these observations: "We enjoyed the projects of the children themselves." "The trading post

***ELIZABETH PARKER** is a teacher, Cedar Grove Public Schools, Cedar Grove, New Jersey. Mrs. Parker wrote this report for the Cedar Grove Curriculum Group.*

looked real." "We liked the way the pioneer exhibit was set up, it looked real and we learned a lot about pioneers." "The map showed how the U. S. has grown." "The pictures were neat, they brought out the ideas about the West and we liked the way the lettering stood out on the map." A visiting teacher commented: "The children were interested, they remembered details and it was a good chance for the children to express appreciation of others' work."

Examining Assumptions

At this time we began to ask, how valid are these assumptions? What are we really after? We need to define the problem and perhaps restate it. Evaluating the status of our bulletin boards at this time seems essential. Through a discussion of the above anecdotes, the following new assumptions were made:

1. Children are anxious to display their own work.
2. Children's work is more valuable than teacher's work, when on display.
3. Teacher's display is not valuable at all.
4. The length of time any kind of work is displayed is an important consideration when determining its value.
5. A bulletin board display is helpful to parents in making comparisons.
6. It is good to display work by all children.
7. Children do not look at things on a bulletin board unless they are pointed out to them.
8. An attractive or different arrangement is more attention getting.
9. Comparisons of children's work on the bulletin board are bad.
10. Children are very aware of other people's work on the bulletin board.
11. The older children are the more critical they become.
12. A class that has studied work displayed on a bulletin board in correlation with other subjects will have a better reaction to it, than will children who have not studied and arranged the work.
13. Children do notice work other than their own displayed on the bulletin board.

What are we after in our use of bulletin boards? We want them to assist in learning. We want our classrooms to be attractive. We want children to assume responsibility for the use of bulletin boards, for their creative work and as a source of information.

Defining terms at this point was considered essential. What do we mean by display?

1. Anything that is to be seen for show
2. An arrangement of visual materials
3. To exhibit—to show
4. Anything the child sees
5. Anything tangible that might attract a child's attention
6. Anything or things that are tangible, and that have been placed in the school, and that attract a child's attention.

Perhaps the word, "children," should be eliminated. Difficulty was encountered as we started to define "display." As we went on there was a feeling that the problem itself might have to be restated. A new problem was posed for consideration. What are the aims and values with which the teacher is concerned in developing the visual environment of the classroom in relation to the child's growth and development? A restatement of the original problem was made. How do displays on bulletin boards in a school contribute to the growth and development of children? This restatement of the original problem was still not accepted as definite.

Defining the problem at hand became necessary. Have we sufficient evidence of the uses of bulletin boards? What results do we, faculty members, expect as we use bulletin boards? What about our assumptions? How can we use our bulletinboards more effectively?

The problem, it was decided, should be

left as previously stated. How do displays on bulletin boards in a school contribute to the growth and development of children? We as faculty members are working for:

1. Attractiveness
2. For children to work and plan together
3. To improve the child's fundamental skills in all areas
4. To get the child to learn how to organize
5. To improve the child's standards of work
6. To bring about visual learning
7. To instill an appreciation of other's work
8. To stimulate, to motivate, and to correlate
9. To be a source of information
10. To clarify ideas
11. To broaden the scope of the child
12. To stimulate the child's feeling of belonging to the group
13. To foster and to keep at a high level good public relations
14. To offer encouragement to the child
15. To show the child's progress.

More assumptions were made during the course of the discussion:

1. A display should be of some interest to students, and should be made by the students.
2. The making of a display helps to clarify children's thinking and ideas.
3. When children bring in their own visual material, it is more important to them than the teacher's work.
4. Students like something up on the bulletin boards, rather than having them bare.
5. Pictures on the bulletin board help children with their work.
6. Glancing at bulletin boards acts as a rest period or break for the child.
7. When children's school environment includes the use of bulletin boards from the first years, they will be more conscious of the bulletin board in the classroom.
8. Children have an interest in things (displays) other than their own work.
9. When we put all children's work up without discrimination, the exhibiting of work becomes meaningless to the child.

Our assumptions have dealt with four things: interpreting work to people in the community, sharing, skills and learnings, and stimulating and provoking thought. One is not obligated to test assumptions, but we can relate these to methodology, learning or common practices.

Gathering Evidence

After our careful consideration of all the things we hoped bulletin boards would do, it was time to consider what evidence we had to support our thinking. What types of evidence could we get? We are not going to prove anything, but to demonstrate through evidence from pupils, teachers, principals and other visitors that the use of bulletin boards affects the learnings of children. How could we get this evidence? There are various ways: teacher questionnaires for pupils; questionnaires for teachers; collecting anecdotal information; summaries of observations made by teachers, principals, visitors and parents.

Two questionnaires were given to the pupils of grades five through eight. Children were asked if they noticed or enjoyed bulletin boards. Did they feel that bulletin boards helped them to learn? Did they like to see their own work displayed or material that their teachers had brought in? Had they any further suggestions as to how they would like to see bulletin boards used?

As a result of tabulating responses to these questionnaires several things were apparent. Almost all of the children are very much aware of and enjoy the bulletin boards. They feel that they have gained in all areas but particularly in-

formation and understanding in social studies and science, especially from projects and maps that they have made.

Social learnings were very evident in their responses, particularly the realization of the need to learn to work together and for better planning. It was quite evident from our tabulation that whenever a teacher stressed for a time one particular phase of a subject, the children were very conscious of this phase for some time afterward. For example, in one class where penmanship was made "much of," the children stated on the questionnaire that they like to see these papers on the bulletin board.

The results also showed that the children are very much aware of the fact that working on and developing good bulletin boards helps make their classrooms and schools more attractive.

Another type of evidence is an evaluation of a social studies project that was made by a fifth grade. The class planned a large United States map cut into territorial sections with cut paper pictures depicting water and land transportation and scenes appropriate to the Westward Movement. Groups were chosen by children according to their interests and abilities. Many facts were learned about territories, states, people and transportation. Other types of learnings were also most apparent, such as working more quietly and cooperating with their group, organizing, planning and using time wisely and handling materials and tools safely.

Two student teachers expressed their reaction to the bulletin boards in our school. "Upon our entrance to the school, we come face to face with a unique experience—the use of bulletin boards not only as decorative displays, but more important as reflections of knowledge and learnings."

It was obvious that a great deal of group work and planning had gone into the bulletin boards. These are useful as a source of reference, not only to individual students, but to classes as well, and have become a very important part of the school program.

One kindergarten teacher remarked that her children liked the Thanksgiving bulletin board because they all worked on it and because it had a lot of color. As they see their work displayed, they gain knowledge from each other. Soon all art work begins to take on more form.

Parents always comment on our colorful displays when they visit. "My, what lovely work," was a parent's comment. Parents were seen reading questions and smiling as they observed our bulletin boards. Often parents tell us, "Your room looks very attractive," and comment on the variety of displays. Frequently parents and visitors note the improvement in work from one grade to another and frequently observe the attractiveness of our classrooms. They think they are delightful, interesting and comment on the originality of the work displayed and the use of varied techniques. They are also amazed and surprised at what children can do.

After gathering this data we formulated a hypothesis that seemed to offer the best solution to our problem: "As teachers and children explore ways of using bulletin boards in their work, interest is increased and learning fostered." This is an "umbrella" type of hypothesis under which each teacher could make his own hypothesis to suit a particular need and test it. A hypothesis does not have to be proved, but it must be supported with evidence.

Our final step to date has been to try to show the relationship between bulletin boards and learning. We have asked

teachers to describe their ways of working, to describe the growth of children, to show any evidence that they had that showed a change in the children, and how that change was produced.

Findings

This has not been a problem in action research in the strict scientific sense. It has been a problem study based on the scientific approach to help us think critically about our procedures and teaching tools. We are convinced that bulletin boards are a worthwhile teaching aid, that if used properly with guidance, the work will produce gratifying results. We believe this report is evidence of this conviction.

Teamwork and cooperative effort are essential in a study of this kind. Planning, experimenting, testing and evaluating are the core of the whole idea and genuine enthusiasm and interest on the part of the participating teachers are imperative for the success of the project.

In conclusion we present a brief summary of our evaluation of the entire study; its strengths and weaknesses and how we feel this research has affected our teaching.

Our strengths: The group has continually felt that the study was worth the expended time and effort. They have realized the value of bulletin boards as a teaching aid in the areas of subject matter and social learnings; and that, as in all good teaching tools, the use of bulletin boards is a means to an end rather than an end in itself and as teachers and pupils plan and evaluate together greater learning takes place.

Our weaknesses: The teachers in our group found testing the real value of bulletin boards very difficult and felt very strongly the need for devising more ways of testing learnings we assumed were inherent in bulletin boards. We were not always sure just where we were going and very much needed the help of our consultant. Some members of our group hesitated to take the time necessary for a study of this kind.

Our teaching has been affected by making us more aware of the value of bulletin boards in changing the behavior of children and providing additional stimulus for learning.

A Look at Secondary

(Continued from page 359)

opinion rather than facts. Too little attention has been given to instructional procedures used by education instructors. Attention to methods and specific instructional procedures has been obscured by controversy over the need for methodology. With the aroused interest in college teaching professors of education have the outstanding opportunity to exercise leadership in improving instruction at all levels, a kind of leadership which may rightfully be expected from them.

Bibliography

1. Betts, G. H. "College Students' Reactions to Education Courses." *School and Society* 25:494-96, April 23, 1927.

2. Eckert, Ruth E. "Ways of Evaluating College Teaching." *School and Society* 71:65-69, February 4, 1950.

3. Fryer, Douglas, and Edwin R. Henry. *Handbook of Applied Psychology,* Vol. II. New York: Rinehart & Co., 1950.

4. Gill, Margaret. *Procedures Used by Superior Teachers of Secondary Education.* Unpublished Ph.D. dissertation. Austin: The University of Texas, 1956.

5. Good, Carter V. "Methods in Teacher Training." *The Journal of Higher Education* 1:391-95, October 1930.

6. Kelley, Earl C. *The Workshop Way of Learning.* New York: Harper and Brothers, 1951.

7. Rogers, Lester B. "The Place of Schools of Education in the Program of Improvement of University Instruction." *School and Society* 36:257-64, August 27, 1932.

Forthcoming

Modern Secondary Education

by William M. Alexander and J. Galen Saylor

This complete revision of the basic survey text considered outstanding for its constructive realism prepares the student teacher to meet today's challenging problems—the need, for instance, for better, more widespread preparation for college and problems of curriculum revision in response to public demand. The latest data are used throughout in the many practical suggestions for implementing goals of secondary education at both administrative and classroom levels.

NEW

The Modern Elementary School:

CURRICULUM AND METHODS

by Wilbur H. Dutton and John A. Hockett

BOOKS

The best modern methods of teaching each of the elementary subjects—including new ideas and techniques used by outstanding teachers of music, art, science, speech, arithmetic and reading—are given in this comprehensive study, along with basic material on child development, the learning process, curriculum improvement, classroom control, guidance and evaluation.

2 new Rinehart Education Pamphlets

Are you a GOOD Teacher?
by William M. Alexander

Teaching Study Habits and Skills
by Ralph C. Preston

Send for our latest listings of these and other inexpensive pamphlets now proving invaluable to many teachers and administrators in the everyday work of the schools at all levels.

Just published

Other Schools and Ours

by Edmund J. King

"Excellent" and "exciting" say scores of educators about this new comparative study of U. S. and other school systems. "The kind of book to be read by all intelligent people who want to be intelligent about education."—Frank C. Foster, University of Maine $3.00

Order your copies from

RINEHART

& Company, Inc. • 232 Madison Ave., New York 16, N. Y.

The Importance of People

Column Editor: Fred T. Wilhelms

Gulliver and Other Under-Achievers

I WONDER if you grew up on the same edition of *Gulliver's Travels* as I did: the one with the big woodcut of Gulliver-as-giant in the Land of Lilliput, flat on his back, tied down by hundreds of thread-like ropes fastened to him as he slept, by the six-inch Lilliputians.

That image of the helpless giant was often in my mind's eye in the five days of ASCD's wonderfully stirring fourth annual Research Institute. We were talking much of the under-achievers in our schools, particularly of those with exceptional brains. The examples rolled on and on: so-and-so many boys and girls with I.Q.'s averaging 135 or 150 or 160, achieving less in school than their intellectually mediocre classmates; a case here or there with I.Q. 198 or even 204—and still achieving less than the ordinary youngster in the next chair.

Giants! Simply giants, by the yardstick of intelligence. Mediocrities—or worse—by the measure of what they achieve.

Why don't they rise to their commanding intellectual height and tower among us as the giants our measures say they are? Or better, how can we bring them to stand tall and turn loose the mighty engines of their minds?

These were the questions that haunted us as we debated until all hours in Washington's Burlington Hotel. They are questions pondered far and wide by lay public and profession alike. For, as in Washington, we have everywhere said to ourselves: Here is a terrible wastage of our finest timber; a waste no society could ever afford, least of all ours in these times of trouble.

Stirred to my depths, I listened closely to every suggestion brought forward, to every account of experiment and evaluation. I projected alongside these what I knew to be going on or proposed around the country. I felt a surge of gratitude for the rising concern. I was glad for every earnest effort. And yet a vague uneasiness hovered in the edges, a hard-to-define intuition that while we were searching so hard we might be looking the wrong way.

Look to the Ropes

I said to myself: these emphases on tougher subject matter, faster paced; these pushings and urgings; maybe they're just the thing for those who are already on their feet; but, for the prostrate, may they not be like handing Gulliver a correspondence course on how to strengthen his muscles?

I said to myself: *If you want Gulliver to rise, look to the ropes which bind him.*

For, in the deeper sense, there are no under-achievers. Every organism achieves what it can, given its developed internal resources and its existential environment of stimuli and impediments. Gulliver will get up if he can. For the one sure fact about all organic life is its endless striving, the ceaseless surge

Announcing

THE NEW INTERESTING READING SERIES

Coordinating Editor:
MORTON BOTEL, ED. D.

The interesting Reading Series is a unique collection of new books, providing stimulating reading for middle grade and secondary students who cannot read beyond the 4th grade level.

Here is a series of exciting books designed to fill the teacher's greatest need: material the students enjoy reading—in language they understand!

Your students will thrill to "Ten Great Moments in Sports," "Mary Elizabeth and Mr. Lincoln," "Buried Gold," "Ten Great Moments in History," and other fine volumes.

Send for a complete list of titles and full details today. All books are written on 3d grade level or below, and belong in your classroom now.

PENNS VALLEY PUBLISHERS, INC.

102 South Allen St.
State College, Pennsylvania

of its internal energy beating against all that limits it. Look through a microscope at the tiniest living cell, and you will see the elemental protoplasm endlessly active, perpetually inquiescent. Look with a seeing eye at humankind, and you will see restlessness incarnate, the never-ending surge of wave upon wave of wish and hope and ambition and striving: the struggle to be. It is a fundamental fact of nature: Every organism is striving as best it can.

Is this pessimistic? Does it say that we must settle for present low levels of achievement because they are all these students can reach? No—exactly the reverse, if we can be wise enough. It means that tremendous driving energy is available, if we can get it used.

Those tiny, almost invisible ropes—of what stuff are they woven, and how do they get attached? Can we learn to prevent the weaving, and to find the tiny knots and untie them? All of us have some of them holding us down; do the gifted suffer a special, additional set—a web of strands set high enough to restrict only those who tower? The Lilliputians put ropes on Gulliver precisely because he was too big to be trusted. Does our society, crying for giants, nevertheless unconsciously put ropes on those it finds, because it fears them? Do we teachers, admiring brains as we do, still get scared when too big a mind thrusts its bold way up through our nice webbings of routine?

Nobody knows all the answers. But I am sure—with a sureness that amounts to a passion—that *along with* our concern for refined, accelerated, toughened-up subject matter and raised standards of performance, we had better look to the fundamental prime-movers within the personality. In many a case the job is primarily to *release* and only then to *stimulate* the ability that is there.

A Giant Bound

Maybe I was hurting so hard because I kept thinking back, guiltily, across the years, to the wastage I permitted of by far the most brilliant student I have ever known. He had everything—not only a powerful mind, but with it artistic and literary ability, a sunny disposition, a fine body, and decency—but he just sort of fizzled out. The school was a small, intimate one and I had him for years, with all the opportunity one could desire to help him catch fire. I failed, and I've never quit asking why.

Perhaps I'd fail again, if I could start all over; but with the insights we've gathered over the years I'd go at the job pretty differently.

I think I didn't help him enough to build a valid concept of himself. Because he was so obviously outstanding, I

thought he knew it, that he had a sure confidence to face high hurdles. Now I know that he was unsure of himself; maybe he knew that he had better-than-average competence in a little country high school—just as he played good basketball in that little league—but he didn't know he was championship stuff. Good youngsters rarely do know it, because they've had no way of finding out. He knew he could do the usual lesson handily, but I never helped him test himself on something so very tough that he could see he would be a star in a graduate college.

The people around him were ordinary, and it may have gotten a bit uncomfortable for him when he stood out. Anyway, I think he kept his head down a little—as an occasional tall girl will stoop a bit, to hide her height. It's still hard to see how to avoid that, but it needs a try. We needed to build around him a complete acceptance of what he was—and a sure knowledge within him of that acceptance.

Because he was so intelligent, we looked too much at his intellect. We guided him into work that was wholly academic—not simply in choice of courses but in details within a course. He never had as much chance as the ordinary kids to work at what was *significant to him as a person.* We weren't grim about it, exactly, but there was that steady pressure on that one purely intellectual line.

Strangely enough, I know now that just because he could do any lesson so well we held him very close to specifications. We called it high standards, I guess. But the fact was he had to cross all the "t's" and dot the "i's" more orthodoxly than anybody. If we had looked ahead to visualize him in graduate school or in a leadership position, we'd have known that he, of all our students, most needed *freedom*—to fool around, if you will, and try his wings in a thousand different ways—to be inventive and take the consequences—to get the truly creative man's feeling that just because he wanted to do a thing a different way there must be some validity in his urge. But, because he was nearest to our intellectual ideal, we insisted that he be perfect—and that meant he had to produce the disciplined, finished, orthodox job. He could be creative later.

But, most of all, we simply saw him as a mind. We concentrated on that. We refined it and we polished it. And all the while the little ropes were weaving, weaving. And one more giant went out into the world only half-erect.

Who Are The Giants?

And then, as if all that weren't trouble enough, another question began gnaw-

A Revolutionary Development in Achievement Testing . .

Iowa Tests of Basic Skills

GRADES 3-9

EFFICIENT, ECONOMICAL ELECTRONIC OR HAND-SCORING

And an Outstanding Group Intelligence Test . .

Lorge-Thorndike Intelligence Tests

KINDERGARTEN—GRADE 12

COMPREHENSIVE MEASURES OF SCHOLASTIC APTITUDE

HOUGHTON MIFFLIN COMPANY

BOSTON 7 NEW YORK 16 ATLANTA 5
GENEVA, ILL. DALLAS 1 PALO ALTO

ing at me: Who *are* our potential giants, anyway? Are they exclusively the greatly intelligent?

The question couldn't have come out of anti-intellectualism, because I do believe unequivocally that high intelligence is a resource of untold value. And I'm sure it's not just sentimentality in defense of us common folk, of whom God made so many.

But there is a real, hard-headed question to be asked. As a society we seem to be moving toward a royal-jelly diet for a select few, on the ground that their full development is essential to our progress. That may well be essential—without connoting neglect of the rest. But wisdom in the investment demands the unsilenceable question: Who are to be the chosen ones?

In cold fact, who *are* the kinds of people who get the jobs done that have to be done if we are to survive and prosper? We know, at the very least, that we have problems of moral insight and moral leadership, of organization and administration, of all the arts, of invention, and of business and finance. *In cold fact,* again, how highly do the actual contributions to each of these correlate with the single variable of intelligence? Even to the extent that they depend upon an intelligent person, to what extent is it his intelligence that does the trick?

We don't know. My common sense observation of the world about me leads me to skepticism. If I were some cosmic banker, contemplating a heavy investment in a chosen few of great potential; or if I were some cosmic human-cattle judge, score card in hand, rating the candidates; if I had to do the scoring, I think I would place intellect as only one heavily weighted item on my score card. I think the question is susceptible of research.

—Fred T. Wilhelms, *professor of education, San Francisco State College, California.*

Learning about Learning

(Continued from page 345)

Each of the projects discussed illustrates one or more principles of learning commonly accepted *in theory* but not always employed in educational practice. In the special high school summer program, students exemplified the power of the individual's drive for knowledge when stimulated by new and intriguing material. The team approach to college teaching released, for the graduate assistant, the tremendously vital and highly individualistic learning capacity of the person deeply involved in a responsible situation. The use of instructional secretaries enabled the capable teacher to muster his resources for instruction in such a manner that greater clarity, exactness and thoroughness characterized classroom teaching. It is within the context of such experimentation that theory comes to life for the administrator and classroom teacher.

Carefully developed and controlled cooperative experimentation by theorists and practitioners can provide insurance against abortive and disillusioning experiences. Furthermore, an adequately manned research staff can provide special assistance in the collection and interpretation of results of classroom experimentation. This working relationship can result in an educational experience for the participants in which the effectiveness of theoretically sound educational planning is demonstrated to the classroom teacher and in which the theorist puts his constructs to empirical test.

Curriculum News

Column Editor: Paul R. Klohr
Contributor: Victor B. Lawhead

What Knowledge Is of Most Worth?

AMONG the several anniversaries of educational events which come to our attention this year is that of Herbert Spencer's original article in the Westminster *Review*. This article has posed a central curriculum question for educators during the past century. Reacting in 1859 to what seemed to him undue stress on the ornamental instead of the useful in education, Spencer called for a stepped-up program for science teaching to meet the demands of an emergent industrial society. While Spencer envisaged no basic reorganization of the usual subjects, he proposed criteria for their selection in insisting on a priority for the human functions of *self-preservation, self-maintenance, parental duties, citizenship,* and the *refinements.* Hindered by the lack of a modern psychology of learning he inadvertently fostered a continued emphasis on ornamental erudition by endorsing the dualism of knowledge for *guidance* as communicated in the areas of living listed above, and knowledge for *discipline*—intellectual, moral, and religious. Science was to be the major emphasis and unifying element in an instructional program that still would be concerned largely with the cognitive domain of educational objectives.

Today Spencer's question, though limited in scope for the modern school, still serves the useful purpose of focusing our attention on the problem of content organization in curriculum development. His answer to his own question on priorities in education reminds us of the need to reappraise curriculum content for the learning experiences of most worth. Accordingly, this column reviews some of the interesting developments related to the problem.

• Probably the most noticeable effort toward a reorganization of knowledge to reflect considered priorities can be observed in the field of general education. Hardly a single college has failed in the past two decades to classify its general offerings within broader categories than the traditional subject fields. While relatively few schools have achieved full-fledged reorganization of their instructional programs around basic problem areas, a sizeable number have accomplished a paper integration by grouping a multiplicity of subjects into the broad divisions of the *humanities, natural sciences, social sciences,* and the *arts.* Administratively these divisions have served the purpose of encouraging certain unified courses in communications, consumer education, delinquency, public health, human development, and recreation where curriculum content has transcended subject boundaries.

• ASCD's Commission on Core Teaching, in its current project of core program development, suggests four areas of high priority in answer to the ques-

HARPER & BROTHERS

ANNOUNCES

Individual Behavior:
***A Perceptual Approach to Behavior*, Revised Edition**
By Arthur W. Combs and Donald Snygg
Just Published $6.00

Basic Statistical Methods
By N. M. Downie and Robert W. Heath
April 1

Sociometry in the Classroom
By Norman E. Gronlund
Just Published $4.50

Mental Health and Human Relations in Education
By Louis Kaplan
Just Published $5.00

Education and Public Understanding
By Gordon McCloskey
March 15

Measurement for Guidance
By John W. M. Rothney, Paul J. Danielson, and Robert A. Heimann
Just Published $5.00

Administration of the Noninstructional Personnel and Services
By William A. Yeager
Just Published $5.50

HARPER & BROTHERS 49 East 33d Street, New York 16, N.Y.

tion of what learnings are of most worth. The Commission is asking how effective are core programs in developing skills, techniques, attitudes involved in *critical thinking,* in helping students develop consistent *value patterns,* in developing skills and understandings for *social living,* and in fostering the fullest development of students' *personalities.* The current project is designed to stimulate program development, experimentation, evaluation, and theorizing in this aspect of the secondary school curriculum.

• Probably the best-known recent statements to propose what knowledge is of most worth are reported in the two studies concerned with educational purposes, *Behavioral Goals of General Education in High School* by Will French and Associates, and *Taxonomy of Educational Objectives* by a Committee of College and University Examiners. The former study, which records the consensus of a number of prominent educators and laymen, proposes an emphasis on four areas of behavioral competence: attaining maximum *intellectual growth* and *development,* becoming *culturally oriented* and *integrated,* maintaining and improving *physical* and *mental health,* and becoming *economically competent.*

The latter report, concerned less directly with identifying areas of curricular content than with current avenues for evaluation and test development, offers descriptive categories of the kinds of knowledge held significant in current statements of educational objectives. The report, which includes sample items for testing in the areas of *knowledge, comprehension, application, analysis, synthesis,* and *evaluation,* provides us with still another approach to assessing priorities for content selection.

• For many years educators have divided the curriculum in teacher education into three characteristic divisions of *general education, professional education,* and *subject specialization.* Current discussions suggest that new patterns may be emerging as college faculties, stimulated by self-evaluative studies and foundation grants for experimentation, break new ground in organizational schemes. A new recognition of the contributions of anthropology, social psychology, biology, and sociology to *educational foundations* has moved some faculties to consider a fourth area of curriculum content requiring a competence level beyond that of general education and short of that of the specialist. Such an area of educational foundations, oriented more directly to fields of scholarship other than education but focusing the special insights and principles of these fields on the problems of educa-

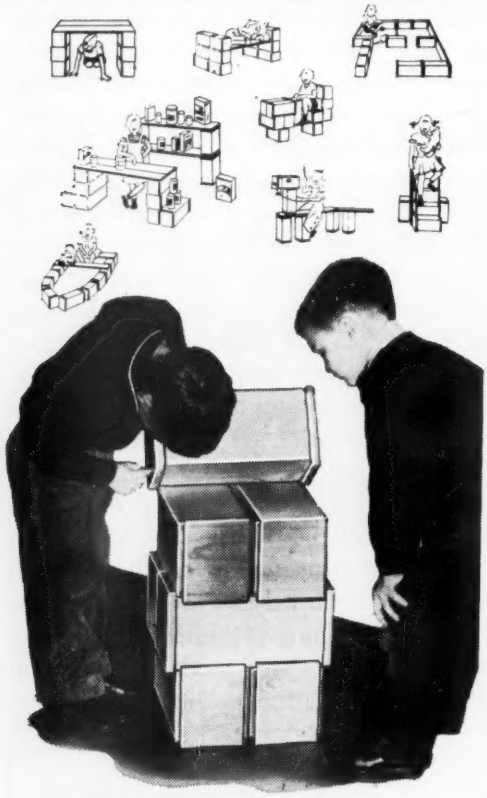
HOUGHTON MIFFLIN COMPANY

FOR FASTER, MORE THOROUGH ATTAINMENT OF INDEPENDENT READING ABILITY

BOSTON 7
NEW YORK 16
ATLANTA 5
GENEVA, ILL.
DALLAS 1
PALO ALTO

THE
McKee
Reading Series
GRADES 1–6
McKEE HARRISON
McCOWEN LEHR

Build these with basic No. 4 Unit—$30 plus shipping



write for free booklet about these fascinating blocks

More than a dozen photographs! See boats, bridges, stores children can build without help. Study the simple interlock (blocks fit together, and *lock*)—it shows you why children build *more* in each play period with Mor-Pla blocks.

Read what teachers say about this unique aid to learning:

. . . "stimulates dramatic play" . . .
. . . "grand for idea extension" . . .
. . . "teaches responsibility" . . .

PLUS—important construction features to remember, in choosing hollow block equipment. All in one small leaflet, free! Let us mail you as many copies as you need for your teachers. Write today.

mor-pla jumbo-blox

R. H. Stone Products
Dept. E-3, P.O. Box 414 Detroit 31, Michigan

tion, offers new challenges in curriculum organization along interdisciplinary lines. Germane to this development is such a study as that in leadership currently being conducted at The Ohio State University. In this study psychologists, sociologists, and economists have undertaken the description and measurement of leader behavior. Other examples are the interdisciplinary studies of public administration, of emergent values in American culture, and of public health.

• While much of the current interest has centered on agreement on areas of common learnings, more still needs to be done toward organizing curriculum content to deal effectively with individualized needs and talents. Since general education should deal with both common and specialized needs, it seems pertinent to remind ourselves that the organization of general education must encourage and nurture students' unique and selective interests to the point where technical programs can effectively develop specialized competence.

Here again, ASCD's current interest and efforts in individualization of instruction should offer new insights into organizing the curriculum to meet this responsibility particularly in the lower school and in the junior high school. Experimental studies in the teaching of foreign languages and special phases of the arts have indicated the value and necessity for new and flexible organizations at this level.

The task of deciding what knowledge is of most worth is complicated further by the peculiar role of the school in a society prolific with youth-serving agencies, many of which also carry an educative function.

—VICTOR B. LAWHEAD, *assistant dean, Ball State Teachers College, Muncie, Indiana.*

Curriculum Bulletins

Column Editor: Marcella R. Lawler
Professor of Education
Department of Curriculum and Teaching
Teachers College, Columbia University
New York 27, New York

NOTE: The following faculty members of Teachers College, Columbia University, and outside staff instructing at the College assisted in the preparation of materials related to their areas of specialization: Phillip Bacon, Teaching of Social Studies; Robert Rasmussen, supervisor, Pre-Service Core Student Teaching; Emma Sheehy, Kenneth Wann, and Paul W. F. Witt, Department of Curriculum and Teaching.

• Division of Elementary Education, Board of Education. *Through the Doorway of Kindergarten to School.* Niagara Falls, New York: the Schools, 1957. 16 p.

This very useful booklet is addressed to parents and is designed to assist them in preparing themselves and their child for kindergarten.

The notes of greeting by the superintendent of schools and the director of elementary education are an extension of the concrete evidence suggested by the booklet itself that a school system welcomes both parents and child. Following the greeting, important and significant assistance is given to the parent on "What Can I, the Parent, Do to Get My Child Ready for Kindergarten?" "What Information Will the School Need Before My Child May Enter?" "Will My Child Be Safe Going To and From School?" "What Are the Hours of the Kindergarten Day?" "What Should I Do When My Child Has to Stay Home?" "How Can I Learn More about My Child's Program in Kindergarten?" "How Do the Children Start the School Day?" "How Do Children Learn in Kindergarten?" "What Can I Do at Home to Help My Child in Kindergarten?" "What Is the School Health Program?" "How Can I, the Parent, Help to Further the Health Program?" "What Are the Signs of Infectious Diseases?" "What Are Some Good Books and Pamphlets about Young Children?" (No price quoted.)

• Frederick County Board of Education. *Handbook for Core Teachers*, Core Bulletin Number One; and *Understanding Myself and My World and Living in A Democratic Society*, outlines for grades 7, 8, 9, Core Bulletin Number Two. Frederick, Maryland: the Schools, 1957, 79 p. and 1957, 66 p.

These two bulletins were developed by a group of 18 core teachers in Frederick County one summer working under the leadership of Evelyn F. S. Davis, junior high school supervisor; and with Jean Harnish, psychiatric social worker for the Frederick County Health Department; Gladys Hopkins, supervisor of curriculum of the Maryland State Department of Education; Fern Schneider, associate professor of education, University of Maryland; and Grace Wright, specialist in secondary education, U.S.

Recent and Forthcoming . . .

Early Elementary Education

By **Myrtle M. Imhoff.** This new text is concerned with the early elementary education of children four to eight as it is related to the total public school elementary program, to democratic philosophy, to growth and development, to principles, and to history. Supplementing the text are numerous illustrations of classroom activities as well as functional projects and questions in each chapter.

Just published

Introduction to Educational Research

By **Carter V. Good.** This is an introductory book on research methods for field workers, graduate students in the early stages of their work, and seniors in the undergraduate college. It is intended to serve the purposes of both producers and consumers of research, with research presented as a method of problem-solving or of finding answers to significant hypotheses or questions.

424 pages $5.00

Education and the Democratic Faith

By **Ephraim Vern Sayers** and **Ward Madden.** Believing that life and education are inseparable, and that the fundamental fact of life in the United States today is the existence of deep cleavages as to the meaning, scope, and future of democracy, this new text is organized around the principal issues that divide Americans today in their opinions of the nature of democratic thought.

472 pages $4.25

Student Teaching in the Elementary School

SECOND EDITION. By **James B. Burr, Lowry W. Harding,** and **Leland B. Jacobs.** The revision of this comprehensive text incorporates the most recent developments in the field. Each chapter has been revised to include many new ideas as well as refinement of ideas previously presented. Substantial rewriting of the material has resulted in the attainment of new standards of readability and of clarity of statement.

453 pages illus. $5.75

The Guidance Function in Education

By **Percival W. Hutson.** Believing guidance to be a function performed by all school workers—principals and teachers, as well as counselors and deans—and also to be a function performed at all levels from elementary school through college, this book appraises and interprets the rich literature dealing with the guidance function and presents the best of existing knowledge in the field.

680 pages $6.00

Appleton-Century-Crofts, Inc.
35 West 32nd Street New York 1, New York

Department of Health, Education, and Welfare, acting as consultants.

The Handbook for Core Teachers deals with many areas about which the core teacher raises questions in a simple, direct way which would be very helpful to either the teacher new to core, or to the teacher new to the county. For example, one brief section titled, "The Teacher and the Classroom," lists and discusses the characteristics of a teacher capable of meeting the needs of junior high school youth. One completes the reading of this section—one and one half pages—knowing the expectations held for him as a teacher of children, as a teacher in a profession sharing responsibilities for developing the school in which he is working and the profession of which he is a part. Another such section lists 25 "ifs" which characterize a good teaching situation.

Understanding Myself and My World and Living in A Democratic Society is a first effort to put down on paper "skeleton outlines of units in suggested problem areas" for grades seven, eight and nine. This handbook does what it proposes to do.

It would be extremely helpful to the many school systems making first efforts to develop materials if Frederick County could evaluate these two early efforts in production of materials for core teachers to learn which sections had been most helpful to teachers and which least helpful; the experience and training of people who had profited from the various types of suggestions, and the kinds of materials teachers and leaders would suggest are now needed—two years later.

• Long Beach Unified School District. Division of Instruction. *Life in Mexico.* A Unit for Fourth Grade Children. Long Beach, Calif.: the Schools, 1958. 284 p.

NEW Books from Prentice-Hall . .

1

STORYTELLING

by RUTH TOOZE, Educational Consultant for the State Department

A storehouse of useful information about one of the oldest creative arts, this new book offers concrete suggestions on how to become a good storyteller for children.

All who are interested in children's literature, speech and reading programs, or creative dramatics will find it useful.

This delightful book captures the inner joy of childhood and bridges that difficult gap between reality and storyland.

576 pp. Pub. 1959 Text price $3.95

2

RESEARCH IN EDUCATION

by JOHN W. BEST, Butler University

RESEARCH IN EDUCATION introduces the students to the fundamentals of research technique. Emphasizing research processes, the author develops the essential tools for locating and using educational information and data.

The student becomes acquainted with research as he will conduct it alone, as he will participate in it as part of a group, and as he will guide it as an educator.

Approx. 320 pp. Pub. 1959 Text price $5.75

3

THE ROLE OF THE TEACHER IN GUIDANCE

by EDGAR G. JOHNSTON, MILDRED PETERS and WILLIAM EVRAIFF, of Wayne State University

Focusing primary attention on those phases of guidance in which the teacher plays a strategic role, this new volume combines up-to-date psychological theory with the latest factual material available for direct application to classroom situations.

The book approaches the problem from the teacher's point of view, helps him fulfill his vital function as a guidance worker more effectively.

Approx. 288 pp. Pub. Apr. 1959 Text price $4.95

To receive approval copies promptly, write: Box 903

PH PRENTICE-HALL, Inc.
Englewood Cliffs, New Jersey

Basic Reading leads to wide reading

THE NEW
BASIC READERS

—help children develop the skills that make reading easy and satisfying
—open up new interests for youngsters to explore on their own
—introduce boys and girls to good literature of the past and present

SCOTT, FORESMAN AND COMPANY

Write for "Helping Children Discover the Joys of Wide Reading"—A-330

Chicago 11 Atlanta 5 Dallas 2 Palo Alto Fair Lawn, N.J.

This very well-planned and detailed unit of work, although developed with fourth grade children in mind, would be of assistance to teachers in other districts in planning work with children of various grade levels. The sections presenting sources for information and material as well as those on bibliography are excellent.

The introductory sections suggest that children of this age are interested in stories of other children their age, that they are able to observe similarities and differences and that Mexico is literally their neighbor. It is pointed out that "more important than the ideas children will gain from a study of Mexico are the attitudes they will develop toward people of another culture—attitudes developed under the guidance of the teacher as concomitant learnings to the content studied." The teacher is reminded that he must have broad understandings of the history of Mexico's past and present development and that he must examine carefully his own attitudes towards the people of Mexico if he is to influence positively the understandings and attitudes of the children.

Detailed suggestions are presented for initiating the unit, "The Overview: How One Class Developed the Unit," includes descriptions on such areas as arrangement of the environment, children's reactions to the environment, evidence gathering by students and instructional materials used by children. Other major sections of the unit are "Suggested Areas of Experiences," "Evaluation," "Sources of Information and Materials" and "Bibliography." (No price quoted.)

• San Bernardino County Schools. *Guide to Music Experiences for Children.* San Bernardino, California: the Schools. 75 p.

This booklet not only provides an

orientation to an assistance for the teacher in several important areas in music, but also catches the interest of the reader from the time he opens it. The format is outstanding and generally enhanced by the photographs of children engaging in musical activities.

"We Believe," prepared by Alice M. Snyder, consultant in music education, presents the philosophy of the school system relative to children's music. Since it encompasses many important ideas relative to music experiences for children it is quoted here in full.

All children are musical, and all children need music.

Our greatest service in elementary music is to preserve the child's keen interest in the love of music.

We help fulfill his need of music by giving him many opportunities to develop his musical capacities.

By encouraging his efforts we foster his self-respect and confidence.

We can best serve children by being sure that their experiences are musical and that at all times the integrity of the music is maintained.

Music should be an everyday experience in the lives of boys and girls.

Each day's experiences will include rhythms, listening, singing, playing instruments, and creativity.

Music, rightly used, will beautify the lives of both children and teachers.

The guide includes chapters titled "Rhythms," "Listening to Music," "Singing," "Playing Instruments," "Creative Activities in Music," and "Music Skills." Excellent teaching-learning situations are suggested; many instructional materials are presented and the material is organized for easy and efficient use. Indeed this is the type of curriculum guide which might well be used by students as a resource material in their planning of appropriate musical activities for units of work.

Spring, 1959 publications—

THE TEACHER AND SCHOOL ADMINISTRATION
Jefferson N. Eastmond, Brigham Young University

An extensive treatment of the professional organizations, legal structure, and administration of American education, with particular emphasis on the problems of school administration with which teachers should be familiar. approx. 475 pages

SOCIAL ISSUES IN PUBLIC EDUCATION
John A. Bartky, Stanford University

For the intelligent layman and the prospective teacher, an introduction to the social issues of education which integrates the foundational and sociological approaches by a consideration of their common objective. approx. 425 pages

HOUGHTON MIFFLIN

Boston 7, Massachusetts
New York 16, New York
Atlanta 5, Georgia
Geneva, Illinois
Dallas 1, Texas
Palo Alto, California

To develop GOOD READERS and EAGER READERS use the

Complete Ginn Reading Program

THE GINN BASIC READERS

Basal books for grades 1-8 outstanding for the interest and quality of their stories and poems and the thoroughness of their Manuals. Organized vertically as well as horizontally to assure reading growth from year to year. Workbooks, charts, cards, tests, records available.

THE GINN ENRICHMENT READERS

Delightful collections of stories and poems to simplify transition from grade to grade at the primary level, and to promote independent reading.

Come With Us • Under the Apple Tree • Open the Gate
Ranches and Rainbows • Fun and Fancy

GINN BOOK-LENGTH STORIES

Developing story or unit themes in the basal readers into whole books. Freshly written by well-known authors.

A Dog Named Penny (Bulla) — Secret on the Congo (Simon)
Becky and the Bandit (Gates) — Tomorrow Will Be Bright (Hunt)
Seecatch: A Story of a Fur Seal (Montgomery)
The Missing Mitt (Chandler) — Adventure in the Sierras (Fea)

Home Office: Boston

Ginn

New York 11 · Chicago 6 · Atlanta 3
Dallas 1 · Palo Alto · Toronto 16

Curriculum Research

Column Editor: Alexander Frazier
Contributors: M. Vere DeVault
and Beeman N. Phillips

Intraclass Grouping Practices in Elementary Classrooms[1]

SUPERVISORS, administrators, and classroom teachers have consistently advocated the use of intraclass grouping practices for instructional purposes within elementary classrooms. Research and writing indicate extensive interest and concern in intraclass grouping at the elementary grade level for at least three purposes: (a) It is believed by some that the mental health of pupils is improved as a result of the effective use of intraclass grouping. (b) The effects of the group on the attitudes and achievement of the individual are the second stated purpose for which intraclass grouping is recommended. (c) Some educators advocate intraclass grouping as the means by which teachers deal with individual differences of pupils.

An earlier study at the University of Texas investigated intraclass grouping in six elementary school classrooms.[2] The current exploratory study was undertaken by the research team to study two questions:

First, *Why do teachers group?* (a) What teaching attitudes and adjustment factors of teachers are related to grouping in classroom instructional programs? (b) In what manner do the classroom organizational beliefs and supervisory practices of the elementary principal affect the grouping practices employed by teachers in his school? (c) Are there grade level factors which account for the difference in the grouping practices of teachers?

Second, *What are the effects of grouping on pupils?* (a) What is the relative effectiveness of cooperative and competitive groups on the slow and rapid learner? (b) What are the relative merits of individual competition and group competition in pupil motivation? (c) To what extent does the grouping organization affect the self and peer evaluations of classmates?

The Method

In the major portion of our work thus far, we have attempted to describe grouping practices and to relate such practices to teacher, principal, and grade factors. In addition, we have begun to determine the effects of various kinds and conditions of grouping on children through both naturalistic and controlled experiments. Some of the instruments which we are using are briefly described as follows:

[1] Supported by a grant from the Hogg Foundation for Mental Health at The University of Texas, Austin.

[2] Mary Clare Petty. *Intraclass Grouping in the Elementary School.* Austin: Bureau of Laboratory School, The University of Texas Press, 1953.

NOW COMPLETE

The LAIDLAW HISTORY SERIES, Grades 4-8

Eibling • King • Harlow

GREAT NAMES IN OUR COUNTRY'S STORY
OUR COUNTRY'S STORY
OUR BEGINNINGS IN THE OLD WORLD
OUR UNITED STATES

Outstanding Features:

- A *Completely New* Program
- Written in an exciting narrative style
- Contains abundant pupil-teacher aids
- Beautifully illustrated

Write for *free* Presidents Wall Chart

LAIDLAW BROTHERS

River Forest, Illinois
Palo Alto, California
Atlanta, Georgia
Summit, New Jersey
Dallas, Texas

1. Grouping practices—A 30-item instrument developed by the project team. This instrument provides primarily a measure of the amount of grouping rather than the qualitative aspects of grouping. It has been checked for reliability and validity, and further validation studies are planned. One procedure which offers promise is a tape-recorded interview with children on "The things we do in class."

Data on grouping practices from different frames of reference are obtained from teachers and principals. Teachers describe "The way I teach," "The way I would teach under ideal conditions," and "The way I think my principal wants me to teach." The principals respond to the instrument for "The way I would teach under ideal conditions," and then for each teacher "The way I think this teacher teaches."

2. Background, adjustment, and teaching attitudes of teachers—the TMAS, the Cook-Medley Hostility Scale, MTAI, and the F-scale are employed. Various kinds of background data also are collected.

3. Supervisory practices and their effects on grouping are determined as teachers and principals rate the effectiveness of specific practices.

Preliminary Results

Why do teachers group? We have obtained consistently significant correlations between selected adjustment factors and the tendency of teachers to group as measured by our grouping practices inventory. These significant correlations are apparent only when we take into account the school systems and grade levels as variables. When all teachers are considered together, the correlations approximate zero.

These puzzling results appear not to

be related to the major undergraduate work of the teacher, whether or not he prepared originally for elementary education, whether or not he had student teaching prior to his teaching experience; neither are they related to other personal factors of age, marital status, number of children, etc. These findings indicate that adjustment factors play an important part in determining the instructional practices teachers employ in the complex professional setting in which they teach.

Effects of Grouping on Pupils

In our studies we have found that situations which involve group competition tend to enhance the performance of pupils with low achievement and to adversely affect the performance of pupils with high achievement. This result is possibly due to the fact that a slow child gains more than his usual share of status from the performance of others in a group situation than do other children.[3]

Next Steps

The research team has just started its work on the question of the effects of grouping on how children see themselves and others. Another area in which the team is beginning investigation is the effects of grouping on various indices of mental health of pupils.

If grouping is an effective method of classroom organization, we need more information which will answer questions relative to the kind of grouping which is most effective for particular types of educational tasks and for certain learners. What are the merits of grouping in the classroom for the slow learner as compared to the rapid learner? Do all benefit most from the same kind of group structures? Is group cohesiveness an important factor in the formation of groups organized for some kinds of tasks and not for others?

One of the most challenging problems which confronts the research team at the present time is that of trying to explain why different relationships are found between teacher adjustment attitudes and grouping practices in different school systems (and possibly also for different schools and grades within a system). The school system is a sociological unit which exists on three levels: the classroom group, the teacher group, and the administrative-supervisory group.

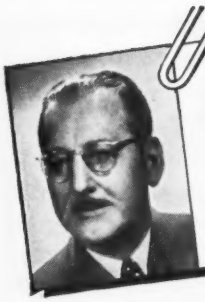
The importance of studying the interrelationships within and among these three levels as one investigates questions relative to any one level becomes more apparent as our work progresses.

Our results indicate that the effect of a teacher personality type is dependent upon the social climate in which he works with other teachers, the kinds of pupils with whom he works, the supervisory-administrative relationships which are established with him, etc. These variables seem pertinent and must be accounted for before we will be able to find substantial answers to the question, Why do teachers group? If such answers are found, it is thought that solutions will be forthcoming for many of the problems which schools and school people are continuously facing.

—M. Vere DeVault *and* Beeman N. Phillips, *associate professors of education, The University of Texas, Austin, Texas.*

[3] B. N. Phillips and M. V. DeVault. "Evaluation of Research on Cooperation and Competition." *Psychological Reports* 3:289-92, 1957.

———. "The Effect of Children's Status on Their Performance Under Self, Group, and Individual Competition." Paper read at the American Educational Research Association Meeting in Atlantic City, 1959.



A LETTER from John Rowe

Britannica Junior

425 NORTH MICHIGAN AVENUE • CHICAGO 11, ILLINOIS

EDUCATIONAL DEPARTMENT

MERIT RATING—JUST A 'LOOKIN'

Dear Friend:

In the current controversy over merit ratings we are in the fortunate position of the retired bronco buster. On the fence, a' settin' and a'lookin'.

We're fortunate, because our job is to help raise the "rating" of all teachers and schools—whether the rating is official or not.

To that end we have designed Britannica Junior for elementary school use exclusively. There is no material on the high school and college levels. There are no "roadblocks" to discourage the young reader. For this reason, children do not need assistance when they "look it up" in Britannica Junior. The research habit is established at an early age, and teacher's time is saved.

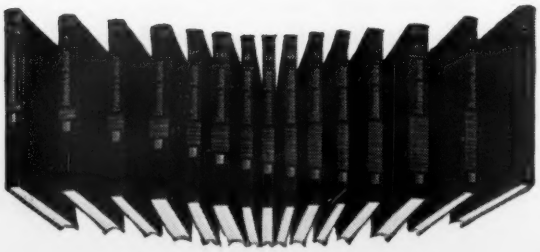
This learning will not have to be altered in high school because Britannica Junior, like adult encyclopaedias, has a complete index in one volume.

These are some of the reasons why we believe that Britannica Junior—in elementary classroom use—can increase the efficiency of the teacher and help schools develop students who are better equipped for high school studies.

Yours sincerely,

John R. Rowe

John R. Rowe
Educational Director



Significant Books *in* Review

Column Editor: Howard B. Leavitt
Contributors: Prudence Bostwick
Victor B. Lawhead

The High School in a Changing World. ***American Association of School Administrators. Thirty-Sixth Yearbook.*** *Washington, D. C.: the Association, a department of the National Education Association, 1958.*

At a time when pressures are great for speeding up the production of scientists and engineers; at a time when there is a feeling among some influential people that the secondary school should be primarily concerned with the education of those with greatest ability, it is gratifying to hear the leading group of school administrators in this country affirm with clear voice and strong faith that only as the educational program of the high school contributes to the development of every boy and girl can it serve a democratic society. This emphasis upon the uniqueness and worth of each individual and upon the responsibility of the school to help him grow in self-realization and social effectiveness is, in fact, the unifying theme of the thirty-sixth yearbook of the AASA.

In stressing the individual and his personal-social needs, the authors recognize all degrees of ability from the least to the most brilliant. Committed to a program in which the growth of each individual is central, the writers of the yearbook recognize the limitations of present secondary school organization. They urge the development of comprehensive programs which provide both a much enriched general education through which social unity may be achieved and a vigorous specialized education where the individual may develop the powers necessary for fulfillment of his plans beyond high school, whether professional or immediately vocational. Here emphasis is upon behavioral goals and upon the need for a guidance program which is inherent in the curriculum and which grows out of the necessity for designing learning experiences consistent with the personal-social needs of individuals. Experimental programs are cited, ranging from those initiated in the Eight-Year Study of School and College in the 1930's to the most recent "Random Falls Idea" of schools within schools and of programs which reach out into community life.

The authors of the yearbook see the secondary school as a logical center for coordinating all efforts that contribute to the welfare of youth. Support is given this idea by recognition of the need for a community approach to the education of young people and an increasing use of community resources in bringing life and school together.

New relationships between school and college are emerging after the long struggle of the school to reconstruct its programs free of college domination. Joint school and college planning and scheduling are suggested as ways of solving present difficulties of multiple applications, poor timing, and poor communication. Already in some localities school-college coordinators are at work furthering these new relationships.

take a GIANT step in '59!

READER'S DIGEST READING SKILL BUILDERS

- *Fourteen books of graded material adapted from The Reader's Digest for Grades 2-8 reading levels*
- *Stories and articles packed with action*
- *Exercises as delightful as the articles*

Your pupils will stride ahead in

- COMPREHENSION
- VOCABULARY
- EXPRESSION

Send today for Brochure EL/3

The Reader's Digest Educational Department

Pleasantville, New York

In chapters dealing with school organization and staffing and with the leadership role of the principal, the Yearbook Commission points out the changing character of secondary school administration. Increasing use of clerical staffs and assisting professional personnel is freeing the administrator for leadership in planning, organizing, supervising, and evaluating the total program of the school.

Chapters on district planning and school housing urge the adaptation of organization and physical plant to the central purpose of the school—meeting the needs of individual students and creating environments to foster cooperative planning and learning. Illustrations are given of imaginative, new ways of providing workable units within the large high schools which are characteristic of urban building. Reference is made to proposals for school buildings which have "the ultimate in space, fluidity, versatility and convertibility."

As the authors look forward to the possibilities of the new high school, they are aware of the major weaknesses of most of the high schools of today: orientation to the past, lack of a coordinating philosophy, textbook and subject centered curriculum, lack of cooperative planning among teachers, supervisors, and administrators, and lack of behavioral goals. They regret that "significant innovations in curriculum structure and content are reported only by the venturesome few."

A yearbook which is concerned with so large and controversial a topic as the place of the high school in a changing world cannot provide extensive help to administrators or indicate many specific ways to improve programs and increase the quality of human relationships in a school. It can, however, state a point of

view and illustrate a democratic philosophy in practice. This the 1958 Yearbook has done.

—Reviewed by PRUDENCE BOSTWICK, *professor of education, San Fernando Valley State College, Northridge, California.*

Some Things Worth Knowing. A Generalist's Guide to Useful Knowledge. *By Stuart Chase.* *New York: Harper and Brothers, 1958. 278 p.*

Chase distinguishes between two types of knowledge. General knowledge is that which everyone should know in day-by-day living for intelligent judgments and decisions. Special knowledge is that which people need to know for livelihood, hobbies or for pleasure. Obviously, intelligent citizens need both. In times of stress, however, special knowledge appears to be considered the more practical and important of the two, at least in the short run. The large amounts of outside funds available for special education attest to this fact.

This book is a description of the education of the generalist. He is the person who must make the decisions in public affairs—for only the generalist, says Chase, can be trusted to make decisions affecting the welfare of all.

Most people have made no serious attempt to discriminate between knowledge which is most important and knowledge which is least important. The unassorted, unrelated mass of information that many people possess cannot therefore be utilized efficiently, says Chase. How can this discrimination be made? What knowledge is of most worth? Chase's answer is found throughout his book. The generalist should possess knowledge held together by sequences and ideas and he should have an appreciation of relationships between fields of

Geography for Today's World

BARROWS
PARKER
SORENSEN

OUR BIG WORLD
THE AMERICAN CONTINENTS
OLD WORLD LANDS
A WORLD VIEW

A new program using new graphic arts techniques to make modern geography come alive.

Silver Burdett Company

MORRISTOWN, NEW JERSEY

Chicago • San Francisco • Dallas • Atlanta

Here's how to develop new interest in your **SCIENCE** and reading program!

GET NEW "TRUE BOOK" FILM STRIPS ON FREE TRIAL

Here's an exciting new curricular tool to stimulate children's interest in natural and physical sciences, and to make teaching science and reading easier, much more enjoyable.

These 12 film strips — 35 mm., with 30-35 frames each — all in full color, with big type and few words, are adapted from Childrens Press' famous TRUE BOOKS (more than 2,000,000 copies now in print). See how films will spark group discussion, curiosity and enjoyment, leading to independent reading of the related TRUE BOOKS . . . both "tools" promoting quicker understanding of Study Units.

Entire TRUE BOOK Series prepared under direction of Illa Podendorf, Laboratory School, University of Chicago. For Kindergarten through 4th grade.

SET #1 — TRUE BOOK FILM STRIPS OF NATURAL SCIENCES
- Animal Babies
- Animals of Sea and Shore
- Birds We Know
- Insects
- Plants We Know
- Trees

SET #2 — TRUE BOOK FILM STRIPS OF PHYSICAL SCIENCES
- Air Around Us
- Deserts
- Moon, Sun and Stars
- Oceans
- Rocks and Minerals
- Seasons

FREE TEACHERS' GUIDE included with complete set of 6 films (either Natural or Physical Sciences), boxed, with TRUE BOOK for each film, $37.50. Set of 6 films without books, $28.50. Set of 6 books without film, $9. All postpaid.

FREE TRIAL OFFER!

CHILDREN'S BOOKS ARE IMPORTANT

Childrens Press
Jackson & Racine, Chicago 7, Ill.

Childrens Press, Jackson & Racine, Chicago 7, Ill. Dept. 5

Please send following for FREE trial, at postpaid prices listed below. Check or money order will be sent within 30 days, or if not completely satisfied, I will send back materials within 30 days, paying return postage only.

Sets #1 & # 2 — ☐ 12 films and 12 books.....$75.00

Set #1 ☐ 6 films & 6 books..$37.50 ☐ 6 films only..... 28.50 ☐ 6 books only..... 9.00

Set #2 ☐ 6 films & 6 books..$37.50 ☐ 6 films only..... 28.50 ☐ 6 books only..... 9.00

SHIP TO School_____ Address_____ City_____ State_____

Bill to_____

Ordered by_____

Position_____

study. These are the things most worth knowing. Armed with overarching ideas, or a knowledge framework, the generalist can look up the facts for himself.

The choice of topics for the education of the generalist is a purely personal one, admits Chase, and he invites others to prepare their own lists. He starts his outline in the broadest frame, the study of the universe and what science now knows about it. From here he proceeds to the solar system and then to the history of the earth and how life began. Then five chapters deal with the evolution of civilization from hunting and farming to the most civilizing agency of all, the city. The mass of historical data poses a problem. What history is of most worth for the generalist? He might, says Chase, do three things:

First, he can deliberately turn specialist in respect to his own country, not an intensive specialist of course, but enough to capture the outline of its development and its relations to other countries. He can extend this study to his own broad civilization, whether Arabic, European, East Indian, Chinese. Second, he can choose for study some other country and period, both to experience the delights of exploration and to acquire perspective by comparison with his own culture. For Americans, I would suggest a country in the Orient: Japan, Iran, Thailand; for Orientals, the reverse: France, Sweden, the United States. Third, he can acquire an understanding of the great cultural changes, especially technological, which have leaped national frontiers to affect people everywhere.

From history, Chase turns to theories of cultural development, and to such human activities as language, economics, political behavior, and scientific discovery, which he relates to religion and art. And the big ideas? The theory of continuous creation, the replacement of absolutes by relatives, the limits and capabilities of men, universal ideas and customs found in every culture, the disparity between classical theories of economics and actual practiced economic behavior, the sophistication of so-called "primitive" languages; these are among the many ideas that should be a part of the generalist's fund of knowledge. These are useful ideas for they help to satisfy deep curiosity, they help man to act sensibly and they provide a framework of knowledge which aids in the ordering of other knowledge.

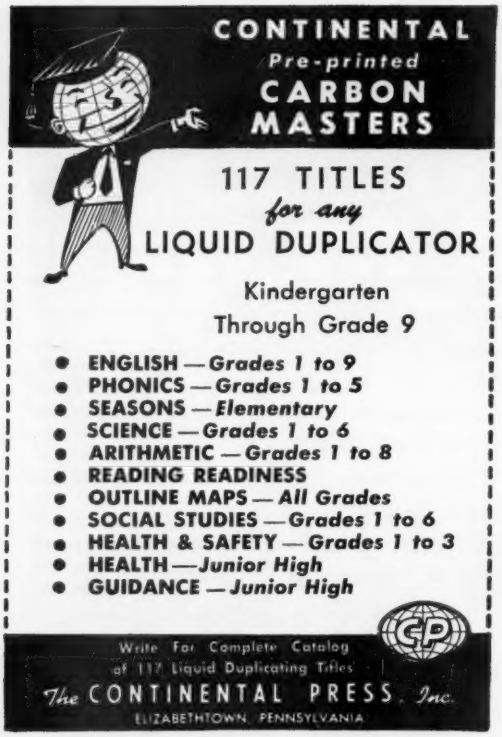
What shall the schools teach? What shall be conceived as general education and what special education? As generalists, in what areas of knowledge are we educators lacking? *Some Things Worth Knowing*, if not answering these questions, will at least stimulate a search for the answers.

—*Reviewed by* HOWARD B. LEAVITT, *associate professor of education, Boston University, Massachusetts.*

Public Education in America. *Edited by George Z. F. Bereday and Luigi Volpicelli.* *New York: Harper and Brothers, 1958.*

Public Education in America purports to be "a new interpretation of purpose and practice" of education in this country. In asserting that the validity of the American system springs from its originality, the editors have marshaled a well-documented set of papers, each attesting in its sphere to the unity of purpose and diversity of practice found in the schools.

Since greater public understanding of public education requires, above all, greater appreciation of the problems—current and historical—which beset the schools, the choices in this collection are timely and crucial. Focusing on current


CONTINENTAL
Pre-printed
CARBON
MASTERS
117 TITLES
for any
LIQUID DUPLICATOR
Kindergarten
Through Grade 9
• ENGLISH — Grades 1 to 9
• PHONICS — Grades 1 to 5
• SEASONS — Elementary
• SCIENCE — Grades 1 to 6
• ARITHMETIC — Grades 1 to 8
• READING READINESS
• OUTLINE MAPS — All Grades
• SOCIAL STUDIES — Grades 1 to 6
• HEALTH & SAFETY — Grades 1 to 3
• HEALTH — Junior High
• GUIDANCE — Junior High
Write For Complete Catalog
of 117 Liquid Duplicating Titles
The CONTINENTAL PRESS, Inc.
ELIZABETHTOWN, PENNSYLVANIA

sociological questions of wide import to the curriculum, the essays by Havighurst, Bereday, Wayland, and Tewksbury balance the historical and statistical emphasis found abundantly in other chapters of the book.

The best parts of the volume, however, are two short essays by R. Freeman Butts and William O. Stanley. As well-chosen end papers for the volume these essays delineate the aspiration and the promise of American education with greater clarity and sharpness than is discernible elsewhere in the publication.

If the book as a whole is less persuasive than volumes written singly by some of the authors included, it can be ascribed to the fact that the editors neglect to use any perceivable organizing element to focus on the crucial points of their argument. A collection or symposium offers an editor freedom to use his imaginative powers in arranging seemingly disparate chapters into categories that suggest creative organization. Failure to provide this needed emphasis constitutes the most serious shortcoming of their effort.

With due recognition of the difficulties attending an interpretive work on education, one might lament also the dearth of editorial and interpretive material accompanying these essays. This is most clearly seen in the selection of Bereday's essay on "The Race Problems in American Education." Taking into account the indigenously American backgrounds of most of the contributors, one regrets that the single essay by an editor deals with a rather specific sociological problem rather than with a general interpretive theme.

Finally, in view of the current interest in the secondary curriculum—particularly in proposals such as those by Conant, the Rockefeller Brothers Foundation, and others—the attention accorded this vital area of American education is hardly sufficient. Although Paul Hanna, in a brief review of the attacks on public schools, sketches the major defensive arguments made for the present program of studies, his essay omits outstanding positive attempts to vitalize the high school curriculum. It would seem that any "new interpretation" of educational practice should assess such current efforts as the improvement of general education through core programs, the introduction of work-experience programs, the use of the community as a laboratory for civic training, or the promising developments in the education of early adolescents in junior high schools.

—Victor B. Lawhead, *assistant dean, Ball State Teachers College, Muncie, Indiana.*

ASCD Publications Currently Available

YEARBOOKS

Learning and The Teacher (1959) Analyzes classroom practices, seeking to derive from them ideas and concepts about learning and to make these more meaningful in terms of the teacher's day-by-day activities $3.75

A Look at Continuity in the School Program (1958) Studies articulation problems, kindergarten through high school 4.00

Research for Curriculum Improvement (1957) Helps teachers and others carry on successful research in school or classroom 4.00

What Shall the High Schools Teach? (1956) Raises basic questions and issues related to content of the instructional program of modern secondary schools .. 3.75

Guidance in the Curriculum (1955) Shows integral relationship between guidance and teaching; treats that part of guidance which the classroom teacher, with the help of specialists, can best accomplish 3.75

Creating a Good Environment for Learning (1954) Shows teachers, parents and others at work creating conditions and arranging surroundings which foster learning 3.75

Growing Up in an Anxious Age (1952) Demonstrates the sustained and cooperative effort of various specialists in solving problems faced by boys and girls growing up in today's world 3.50

Action for Curriculum Improvement (1951) Action story of why and how people work together for better school programs and better communities 3.50

Fostering Mental Health in Our Schools (1950) Mental health as related to the growth and development of children and youth 3.00

Toward Better Teaching (1949) Examples of promising practices in seven significant areas 3.00

Organizing the Elementary School for Living and Learning (1947) Outstanding programs in elementary school curriculum 2.50

PAMPHLETS

Action Research: A Case Study .. $1.00

Better Than Rating: New Approaches to Appraisal of Teaching Services 1.25

Children's Social Learning: Implications of Research 1.75

Curriculum and the Elementary School Plant 1.50

Developing Programs for Young Adolescents 1.00

Discipline for Today's Children and Youth (New Revision) 1.00

Elementary School Science: Research, Theory and Practice .. 1.00

Foreign Language Teaching in Elementary Schools 1.00

Group Processes in Supervision .. 1.25

Helping the New Teacher ..... .75

Juvenile Delinquency: Research, Theory and Comment 1.00

Preparation of Core Teachers for Secondary Schools 1.25

Research Helps in Teaching the Language Arts 1.00

Teachers for Today's Schools .. 1.25

The Three R's in the Elementary School 1.50

What Does Research Say About Arithmetic? (Revised Edition) .. 1.00

Child Growth and Development Chart ..... .10

BIBLIOGRAPHIES

Selected Bibliography for Curriculum Workers (1959) $1.00

Discounts on quantity orders for same title to single address: 2-9 copies, 10%; 10 or more copies, 20%. Orders for $1 or less must be accompanied by remittance. Postage will be charged on all orders not accompanied by cash.

ASCD Membership dues, including Yearbook and subscription to *Educational Leadership*, official journal of the Association—$8.00; Subscription only—$4.50. Comprehensive membership (includes all ASCD publications for membership period)—$11.00.

Order from:

Association for Supervision and Curriculum Development, NEA
1201 Sixteenth Street, N. W., Washington 6, D. C.

A CHECK LIST OF

McGRAW-HILL EDUCATION BOOKS

CURRENTLY PUBLISHED AND IN-PRESS

BROWN, LEWIS, and HARCLEROAD—A-V INSTRUCTION (In-Press)

ELLISON—MUSIC WITH CHILDREN (In-Press)

FROEHLICH—GUIDANCE SERVICES IN SCHOOLS, Second Edition, 383 pages, $5.75

GOOD—DICTIONARY OF EDUCATION, Second Edition, 704 pages, $9.75

HARDEE—THE FACULTY IN COLLEGE COUNSELING (In-Press)

JORDAN—ELEMENTARY SCHOOL LEADERSHIP (In-Press)

KELNER—HOW TO TEACH IN THE ELEMENTARY SCHOOL, 343 pages, $5.50

KOWITZ and KOWITZ—GUIDANCE IN THE ELEMENTARY CLASSROOM (In-Press)

LEAVITT—NURSERY-KINDERGARTEN EDUCATION, 365 pages, $6.00

MARKS, PURDY, and KINNEY—TEACHING ARITHMETIC FOR UNDERSTANDING, 429 pages, $6.00

POWER—EDUCATION FOR AMERICAN DEMOCRACY, 415 pages, $5.75

RICHEY—PLANNING FOR TEACHING, Second Edition, $6.00

STOOPS, et al—GUIDANCE SERVICES, $5.75

STOOPS and WAHLQUIST—PRINCIPLES AND PRACTICES IN GUIDANCE, 369 pages, $5.50

TIDYMAN and BUTTERFIELD—TEACHING THE LANGUAGE ARTS, Second Edition (In-Press)

TOLBERT—INTRODUCTION TO COUNSELING (In-Press)

SEND FOR COPIES ON APPROVAL

THE McGRAW-HILL BOOK COMPANY, Inc.

330 West 42nd St. **New York 36, N. Y.**